

Finish

THE MAGAZINE OF

Appliance AND

Metal Products MANUFACTURING

You Can Depend on "Ceramic" Quality and Service

FOR POTTERY COLORS

Glaze Stains; Body and Engobe Stains; Underglaze and Overglaze Colors for Banding, Spraying and Screening; Decalcomania Colors; Art Glazes; Fritted Glazes; Frits and Fluxes; Liquid Bright and Burnish Gold.

FOR GLASS COLORS

Vitrifiable Colors for Banding, Spraying and Screening; Alkali Resisting Colors; Weather Resisting Enamels; White Enamels; Satin Matt Finish Colors; High Fire Convexing Colors; Low Fire Colors; Printing Colors; Batch Colors; Crystal and Colored Ices; Liquid Bright Gold.

FOR ENAMEL COLORS

Color Oxides; Smelter Color Compounds; Screening Colors; Graining Colors; Stamping Colors; High Temperature Enamels.

FOR SUPPLIES

Screening Oils, French Fat Oil, Oil of Copaiba, Balsam Copaiba, Balsam Fir; Decal Size; Decorating Brushes; Knives and Spatulas; Lining Blocks — Porcelain, High Density Alumina, and Silex; Porcelain and High Density Alumina Balls; French Flint Pebbles; Ball Mills — Laboratory and Production; Porcelain Jar Mills — Laboratory and Production; Paste Grinding Mills; Spray Equipment.

FOR CHEMICALS

Aluminum Hydrate
Aluminum Oxide
Ammonium
Metavanadate
Antimony Oxide
Antimony, Black
Needle
Arsenic Oxide, White
Barium Carbonate
Barium Chromate
Bentonite
Bone Ash
Borax
Boric Acid

Cadmium Carbonate
Cadmium Sulphide
Calcium Carbonate
Chromium Oxide
Clay, Ball and China
Cobalt Carbonate
Cobalt Compounds
Cobalt Nickel
Compounds
Cobalt Oxide
Cobalt Sulphate
Colemanite, Synthetic
Copperas
Copper Carbonate
Copper Oxide
Copper Sulphate

Cryolite
Delomite
Epsom Salts
Feldspar
Flint
Fluorspar
Gum Arabic
Gum Tragacanth
Iron Chromate
Iron Chromite
Iron Oxide, Fractionated
and Powdered
Kryolith
Lead Bisilicate
Lead Chromate
Lead Manganese

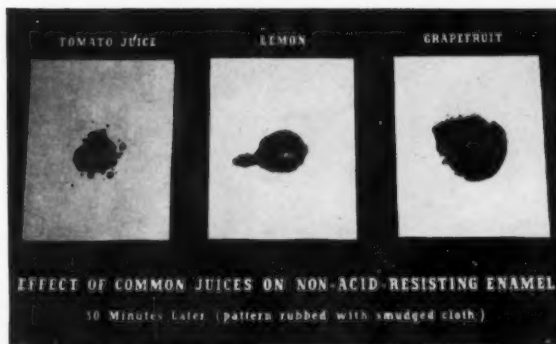
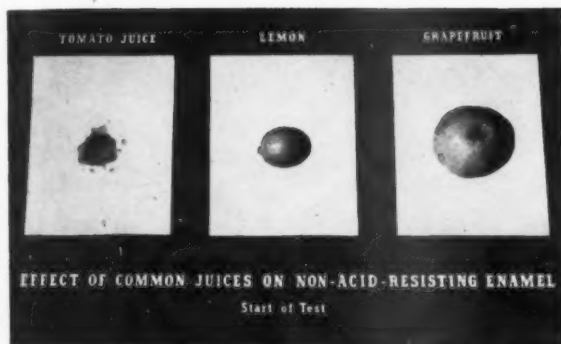
Red Lead
White Lead
Litharge
Lithium Compounds
Magnesite
Magnesium Carbonate
Manganese Dioxide,
Fractionated and
Powdered
Molybdenum
Compounds
Nepheline Syenite
Nickel Oxide, Grey
Nickel Oxide, Black
Nickel Oxide,
Fractionated

Nickel Sulphate
Opax
Potassium Bichromate
Potassium Carbonate
Potassium Nitrate
Potassium Silico Fluoride
Powder Blue
Pyrophyllite
Rutile, Powdered
Selenium
Soda Ash
Sodium Antimonate
Sodium Bichromate
Sodium Fluoride
Sodium Nitrate
Sodium Nitrite

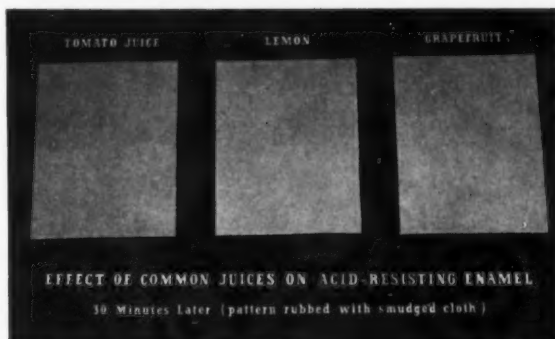
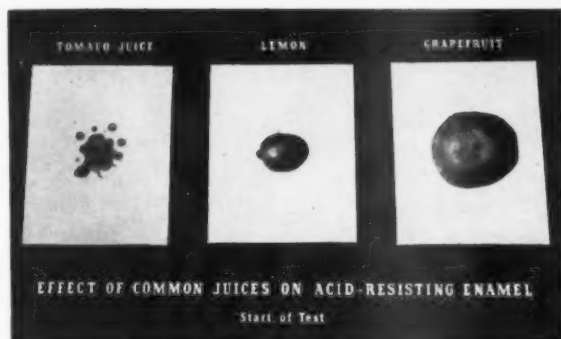
Sodium Silicate
Sodium Silico Fluoride
Strontium Carbonate
Suprapax
Talc
Tin Oxide
Tungstic Acid
Titanium Dioxide
Urea Crystals
Whiting, Cliffstone and
Domestic
Zinc Oxide
Zircon, Milled
Zircopax
Zirconium Silicate
Zirconium Oxide



CERAMIC COLOR & CHEMICAL MFG. CO.
New Brighton, Pa., U.S.A.



This test is dramatic proof of acid-resisting porcelain enamel's immunity to common food juices.



How Acid-Resisting Porcelain Enamel Meets This Test

Because porcelain enamel is a glass-like substance, its general resistance to chemical corrosion cannot be matched by any other surface finish. Housewives have long been aware of its immunity to food acids. In fact, even citric acid does not harm acid-resisting porcelain enamel.

You can give your products this and many other sales advantages with a porcelain enamel finish. Besides its resistance to food acids, porcelain enamel resists heat, scratches, and thermal shock in ordinary household service. It is easy to keep clean and sanitary. And finally, porcelain enamel is a lifetime finish that won't change color.

Use Armco Enameling Iron

When you design the new line, why not take advantage of the sales benefits of a porcelain enamel finish . . . and consider Armco Enameling Iron for the base metal? Its specially prepared surface, uniform flatness,

and excellent bonding characteristics have made it known throughout the enameling industry as the "World's Standard Enameling Iron."

For more information on this special Armco metal, let us send you our catalog, "Armco Enameling Iron." It contains helpful tips on fabricating, welding, cleaning, pickling, and porcelain enameling. For a free copy, just fill in and mail the coupon.

ARMCO STEEL CORPORATION

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Company _____

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SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



**A coating of Lithoform® on a strip of steel
makes Artcraft Venetian Blinds last and last**



Looking better while lasting longer has developed widespread consumer acceptance for Artcraft Venetian Blinds. One reason these blinds age gracefully is the use of Lithoform in preparing them for enameling. This ACP product coats the galvanized metal with a nonmetallic film which protects

against corrosion, provides a permanent bond for the enamel, prevents any objectionable reaction between the metal and the finish.

Write for more information about Lithoform — and the sales advantages it offers you in marketing your product.

AMERICAN CHEMICAL PAINT COMPANY, Ambler 33, Pa.

DETROIT, MICHIGAN

NILES, CALIFORNIA

ST. JOSEPH, MISSOURI

WINDSOR, ONTARIO



September • 1956

VOL. 13 • NO. 9

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finish

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A trade publication devoted to the interests of the metal products manufacturing industry with special editorial attention to home appliances. The editorial scope covers design, engineering, market and statistical information and technical and practical information on plant facilities and all phases of manufacturing "from raw metal to finished product." Free controlled circulation to top management, purchasing, engineering and key plant management and supervision in metal product manufacturing plants. To others, subscription price is \$5.00 per year, domestic. To all other countries \$8.00 per year (U.S. funds). Single copy price \$1.00

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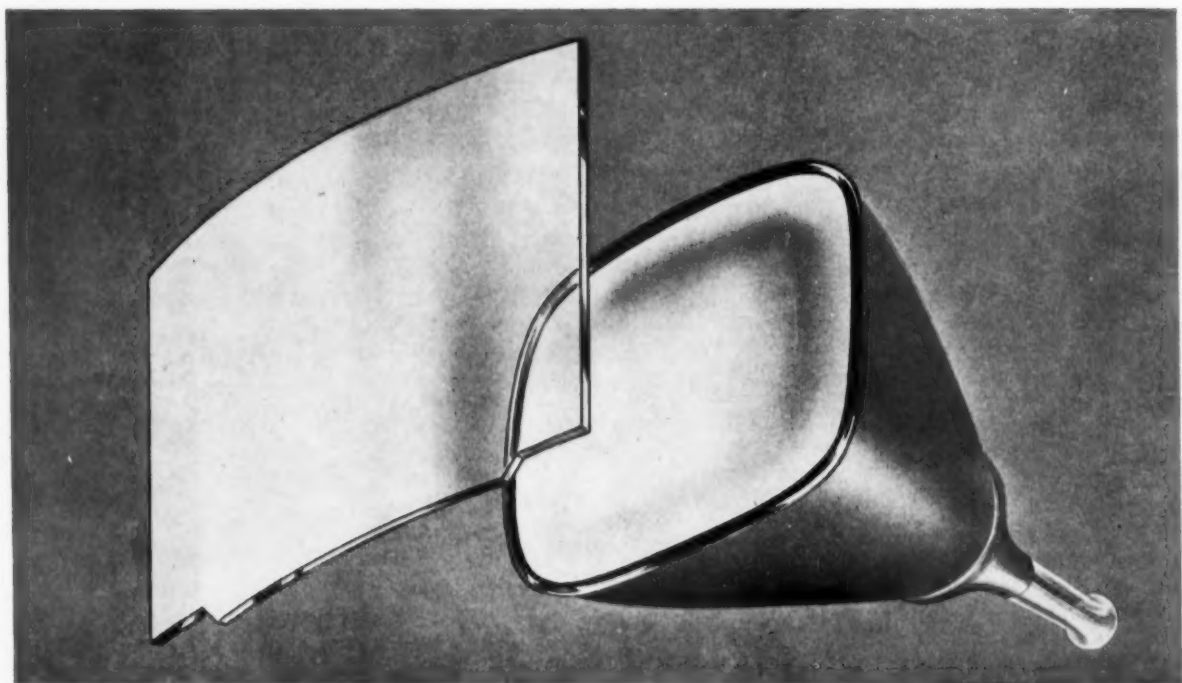
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FROM RAW METAL TO FINISHED PRODUCT



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Join the major appliance manufacturers now enjoying extra sales from the appeal and prestige contributed thru the luster of glass — MARSCO'S Crystal Clear Glass.

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Look forward
with Alcoa



In:re "The Maytag Story"

Gentlemen: having just laid down my copy of the August issue of *finish*, I would like to express my thanks and those of the Maytag organization for the fine coverage given us in "The Maytag Story." I have never seen a more comprehensive analysis of the production operations of this or any other company published anywhere. Your detailed presentation bears out, I feel, our emphasis on quality as the hallmark of Maytag appliances. May I add the thanks of those here who worked with your editors in the preparation of the story to my own personal appreciation for a job well done."

Fred Maytag II
President
The Maytag Company
Newton, Iowa

Gentlemen: . . . your recent Maytag story I feel to be of such importance to our supervision that I would appreciate your sending five tear sheets of this article . . .

C. J. Trone, Jr.
Chief Industrial Engineer
Serval, Inc.,
Evansville, Indiana.

Gentlemen: . . . about that story on Fred Maytag's "little plant" down in Newton, Iowa. Terrific!

Carl Sorby, Vice President
Geo. D. Roper Corp.
Rockford, Illinois

Appreciates the Spotlight

Gentlemen: We, in the Commercial Cooking Department of Hotpoint, were certainly honored to be featured in the "Finish Spotlight" of your July issue. Thanks very much. We shall do our best to qualify for the "Spotlight" in future issues of *finish*.

Bill Ayres, General Mgr.
Commercial Equipment Dept.
Hotpoint Company
Chicago, Illinois

Straightened out deionizer

Gentlemen: The article "Practical Innovations High-Light West Coast Metal Treating System" which appeared in your July issue (page 40) reported that each deionizer supplying deionized water for the Douglas Aircraft metal treating system consists of "Two tanks, one for sulphuric acid, the other for caustic, to provide the anion and cation respectively."

This should have read "two tanks — one the cation exchanger and one the anion exchanger which are regenerated

with sulphuric acid and caustic, respectively." The photo caption on page 45 should have read similarly.

Also, the statement on the solubridge should have read "A solubridge is installed to keep a constant check on the quality of the water leaving the deionizer, which is usually kept at about 3 micromhos specific conductivity." I did not intend to infer that the misstatements made would be as obvious to your readers as they were to us. The point is [that] it is confusing to read something contrary to fact, that can be misleading . . .

Fred J. Williams
Advertising Manager
Elgin (Ill.) Softener Corp.

Ed. Note: Reader Williams goes on to point out that while he is drawing a fine technical line on the description prepared under the direction of West Coast engineers, he wanted to be sure that the record is corrected before readers "quoting from the article" find themselves in error.

Wants to circulate article

Gentlemen: There is an article in the (July) issue which we would like to circulate among our technical people here and in the field, as we are sure there is much to be gained by having them read it. Would you send us . . .

Martine J. Butler, Jr.
The Diversey Corporation
Chicago, Illinois

More information on strapping

Gentlemen: Would you please send me more information on the automatic strapping machine and equipment described in the August issue of *finish* in the story "Packaging Mitchell Air Conditioners", which appeared in your Safe Transit Section. I would like . . .

George Treadway, Engineer
Nashville Corrugated Box Co.
Nashville, Tennessee

Ed. Note: The automatic strapping system at Mitchell Mfg. Co., Chicago, described in the August issue of *finish* was manufactured and installed by the Signode Steel Strapping Co.

Marking plastic parts

Gentlemen: I read with great interest your article on "Methods in use for marking plastic parts and components" in the July issue of *finish* (page 30). I am especially interested in the possible application of the foil and marking die method to the marking of numerals in various dial charts. The plastic is clear methyl Methacrylate, and we would prefer to mold them without the recessed numerals and then mark them in a press as outlined in your article. We would appreciate information . . .

James A. Gatman, Process Engr.
Delco Radio Division
Kokomo, Indiana

Ed. Note: Process Engineer Gatman has been supplied with a list of manufacturers of suit-

to Page 10 →



BETTER QUALITY FINISH... THIRD MORE PRODUCTION AT VOGT IN LOUISVILLE

Vogt Brothers Manufacturing Co., Louisville, Ky., manufactures a wide line of products including shower stalls, power lawn mowers, water works valves and hydrants. Theirs is a typical hot spray success story: Shower stall production was below par in the finishing department. They would not sacrifice quality for quantity. They tried hot spray. Results? Production increased 85 approved units per 8-hour day . . . a one-third increase! And this with only two passes instead of three formerly required . . . and they got a BETTER finish!

The hot spray finish was smoother, with no runs or sags and less orange peel. Vogt Brothers reported better gloss too. Rejects were reduced, and big savings in material were effected. Constant viscosity and low pressure are the two factors that have made hot spray the answer to so many finishing problems.

Find out what hot spray can do for you! A free booklet entitled "Why Hot Spray?" is published by the Spee-Flo Co., Dept. F-24, 720 Polk, Houston, Texas.

New aluminum alloy...

3

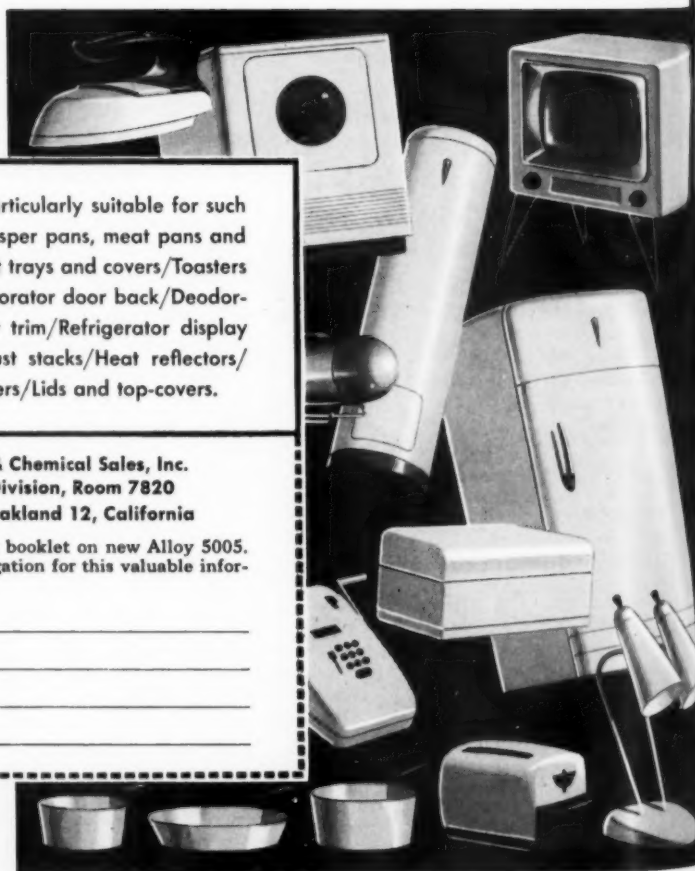
New Kaiser Aluminum Alloy 5005 is particularly suitable for such applications as: Agitators and tubs/Crisper pans, meat pans and evaporator trays/Ice cube trays, dessert trays and covers/Toasters and irons/Evaporator drip baffle/Evaporator door back/Deodorizer parts/Refrigerator trim/Refrigerator display pans and trays/Exhaust stacks/Heat reflectors/Controls/Portable Mixers/Lids and top-covers.



Kaiser Aluminum & Chemical Sales, Inc.
Industrial Service Division, Room 7820
1924 Broadway, Oakland 12, California

Please send my copy of your booklet on new Alloy 5005. I understand there is no obligation for this valuable information.

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COMPANY _____
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CITY AND STATE _____



5005

SHEET AND PLATE

Improves appliance finish without raising costs

NEW superior-finishing Alloy 5005—now available from Kaiser Aluminum—offers appliance makers a new opportunity to create greater product eye-appeal.

SUPERIOR FINISHABILITY. 5005 has a finer, more uniform grain structure than 3003 (with an identical material cost). This fine grain contributes to simpler, less costly finishing and polishing operations, resulting in better, lasting product appearance. Alloy 5005 lends itself to a variety of electro-chemical, chemical and mechanical finishes.

EXCELLENT ANODIZING QUALITY. The lower tendency to streak or discolor makes Alloy 5005 particularly suitable for applications requiring an anodized finish. In particular, its finish is clearer and lighter in color after anodizing than Alloy 3003. Another important advantage is uniformity of color in the final finish.

STRENGTH. The mechanical properties and formability

of Kaiser Aluminum Alloy 5005 closely approximate those for 3003 in the equivalent tempers. However, due to a slightly higher rate of work hardening, the use of Alloy 5005 will generally result in a stronger fabricated product.

NOMINAL COMPOSITIONS

Alloy 5005 0.8% magnesium

Send the coupon today for your copy of Kaiser Aluminum's new booklet of complete reference information on Alloy 5005. Or ask your Kaiser Aluminum sales engineer to give you a copy. At your request, he will be glad to contribute technical assistance for the design and fabrication of Alloy 5005.

Contact any Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office*, Palmolive Building, Chicago 11, Illinois. *Executive Office*, Kaiser Building, Oakland 12, California.

Alloy 5005 Quality Produced by

Kaiser Aluminum

See "THE KAISER ALUMINUM HOUR." Alternate Tuesdays, NBC Network. Consult your local TV listing.



Here's what Bakekote is

Bakekote is the Nickeloid family trademark for a revolutionary new *baked synthetic* protective coating for Nickeloid pre-finished metals, in copper and brass finishes. It contains one of the newest thermosetting resins with film properties far superior to regular lacquer and most other synthetics on the market: maximum gloss, hardness, adhesion, flexibility, chemical resistance, abrasion resistance. The clear Bakekote film is applied to Nickeloid Metals by spray or pressure, then *baked and cured* (not just air-dried) with intense heat. *There is no comparable product on the market today.*

RIGIDLY TESTED and PROVEN



A stamped pan, severely drawn shows no evidence of lifting or cracking.

A canister lid, stamped without a draw ring, has perfect adherence even on the wrinkled flange.

Seamed canister bodies are formed with no lifting or peeling of the Bakekote film.



Greater Salt Spray Resistance

Actual photo of results from 48 hr. salt spray test on pre-plated Copper Steel shows Bakekote (right) provides 80% to 90% better resistance than regular lacquer finish (left).

where you can use Bakekote

A tough, adherent, elastic film, Bakekote coated metal can be drawn, press formed, stamped, roll formed and seamed with no fear that the coating will peel, crack or flake. It's the ideal *protected* copper or brass finish for door hardware, switch plates, knob inlays, light fixtures, bezel plates, housewares.

Write for Details

NICKELOID METALS
SINCE 1898



AMERICAN NICKELOID COMPANY

PERU 11, ILLINOIS

LETTERS CONTINUED

→ From Page 7

able equipment. *Finish* would appreciate, however, readers contacting Gatman if they have any suggestions that would be of aid to him. For others interested it might be wise to note that among those who print on plastic parts by contract are Colonial Art Co., Crane Street, Westfield, Mass., and Printon Corp., 308 East 23rd, New York City. Manufacturers of plastic marking inks include Marken Machine Co., Putnam Street, Keene, N. H. The firms which specialize in hot stamping and inlaying into any plastic material are Plastic Inlays, Inc., Broad Street, Summit, N. J.; Guedon Co., South Haviland Ave., Audubon, N. J. Plastic marking foil may be obtained from Hastings and Co., Inc., 2316 Market Street, Philadelphia, Penn. The hydraulic press, used at Nash-Kelvinator, about whom the story was written, is a Denison.

What are cadmium properties?

Gentlemen: In your August story on the Maytag Co., Newton, Iowa, you state in the story "Plating — for the Maytag Automatics" that parts to be given a cadmium coating are those of irregular shape which are more easily plated by cadmium than by zinc. Admittedly, cadmium has a greater throwing power, but it was my assumption that the greater cost (and it is a good amount) for cadmium in place of zinc was because of its properties for greater corrosion resistance, especially in such a product as a washing machine? Would you comment?

S. J. Marshall
Metal Processes
Pittsburg, Kansas

Ed. Note: Thanks to Reader Marshall for his interesting comments. While *finish* editors have three sources which point out the superiority of cadmium over zinc for resistance to corrosion, a discussion by one editor with plating engineers at Maytag brought forth their comment that their studies have detected no marked difference (cadmium vs. zinc) in corrosion preventive powers. The two main reasons for its use there is primarily "greater throwing power", and secondly, "improved appearance". *Finish* would appreciate the opportunity of publishing further views from readers who handle both or have made studies. Send your comments in!

interested in NST program

Gentlemen: I have just finished reading the article "Pre-testing results in savings for O. A. Sutton" in your May issue. This article was of interest to us, and we would like to learn more about NST testing for packaging and crating. . . We would appreciate all information you could furnish to us. . . .

Edward K. Sanders
Industrial Engineering Dept.
The Trane Company
La Crosse, Wisconsin

We have forwarded Mr. Sanders the booklet, "The National Safe Transit Program", (Jan., Feb., Mar., 1953, *finish*) which outlines the simple testing program set up by the voluntary cooperative group of appliance and metal products manufacturers who from the certified companies under the NST program. We have also informed the NST office in Washington of Mr. Sanders' interest. to Page 89 →

For

EXCELLENT tooling
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EFFICIENT'S...

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Equipment and
Experience

One of Efficient's
Six Large Presses for
Die Tryout

PLANNING

plus

DESIGNING

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plus

TRYOUT

EXPANDED CAPACITY—NOW 2 LARGE PLANTS

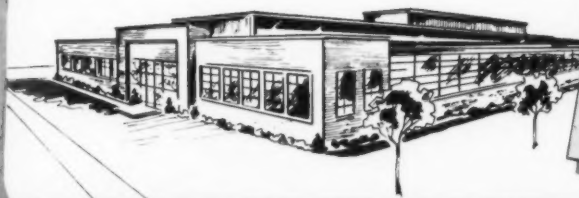
"Growth with the Industry"...has been EFFICIENT'S program! Now we offer...an Enlarged Engineering Staff...a complete Die and Keller Model and Pattern Shop...a new, 33,000 sq. ft. Die and Tool Shop...a Die Tryout Section with extra large Tryout Presses.

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Whatever your tooling requirements, we can build dies that give you long, trouble-free production runs—leave you no metal finishing problems. Let us help you simplify your manufacturing operation, step up your stamping output and lower your unit cost, while assuring consistent high quality.

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MEETINGS

PACKAGING INSTITUTE FORUM

Packaging Institute, 18th Annual Forum, Hotel Statler, Cleveland, September 10-12.

PEI ANNUAL MEETING

Porcelain Enamel Institute, 25th Annual Meeting, The Broadmoor, Colorado Springs, Colorado, September 19-21.

ELECTRONICS CONFERENCE

12th annual National Electronics Conference, Hotel Sherman, Chicago, October 1-3.

ELECTRICAL ENGINEERS MEETING

American Institute of Electrical Engineers, Fall General Meeting, Morrison Hotel, Chicago, October 1-5.

GAS ASSN. CONVENTION

American Gas Association, Annual Convention, Atlantic City, N. J., October 15-17.

PACKAGING EXPOSITION

Society of Industrial Packaging and Materials Handling Engineers, 11th Annual National Protective Packaging and Materials Handling Exposition, Kiel Auditorium, St. Louis, Mo., October 23-25.

SAFETY CONGRESS & EXPOSITION

44th National Safety Congress and Exposition, Conrad Hilton, Congress, Morrison and La Salle hotels, Chicago, October 22-26.

HOME LAUNDRY CONFERENCE

Tenth National Home Laundry Conference, American Home Laundry Manufacturers Association, Conrad Hilton Hotel, Chicago, November 1-2.

ELECTRICAL MFRS. MEETING

National Electrical Manufacturers Association, Traymore Hotel, Atlantic City, New Jersey, November 12-16.

REFRIGERATING ENGRS. MEET

Semi-annual Meeting, American Society of Refrigerating Engineers, Boston, Mass., November 25-28.

MECHANICAL ENGINEERS MEET

The American Society of Mechanical Engineers, Annual Meeting, Statler & McAlpin Hotels, New York, N. Y., November 25-30.

the **SERVICEABILITY**
of **HOUDAILLE'S**
NEW FINISH ON
FREEZER SHELVES
and **EVAPORATORS**
OF STEEL

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► Every conceivable type of test has demonstrated that in addition to reducing the cost of *steel* freezer shelves and evaporators, Houdaille's new electro zinc plating and processing facilities produce the most serviceable of finishes.

Tests at 100% humidity and 100°F for over five times as long as commercial standards require, failed to affect the finish or produce signs of corrosion.

Rapid cycle defrosting tests equal to over 4 years of severe useage left Houdaille cooling plates good as new.

Tests for abrasion, bending, scratching, chipping and resistance to acids and chemicals further demonstrated virtual indestructability.

Yes, this new finish combined with the interior cleanliness and other advantages of Houdaille's copper brazed, tube on plate or plate on plate precision construction in steel, offer today's best answer to sales appeal and service-free evaporators and freezer shelves. Our engineering and test facilities are available to cooperate in producing units to meet your exact need.

HOUDAILLE INDUSTRIES, INC.

Manufacturers of:

Evaporators, Cabinet Cooling Plates
Freezer Shelves and Condensers



A technique in spraying developed by the Ford Motor Company results in exciting rainbow pastels . . . plus new speed in paint application . . . faster color changeover . . . and superb quality of finish.

DESPATCH built and installed the Down Draft Spray Booth shown above in Ford's Dearborn plant. Wealth of production experience assures the highest standard of performance from DESPATCH equipment. There's a DESPATCH-trained resident engineer near you. Why not talk to him about your finishing requirements?

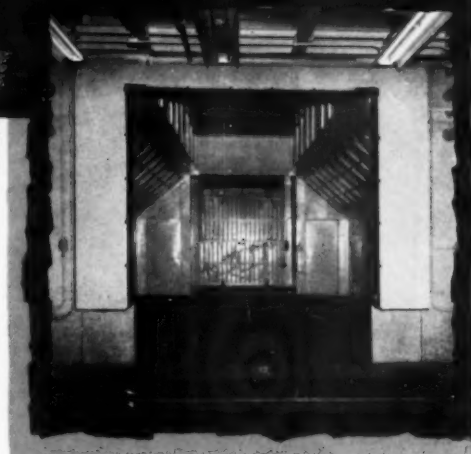


Photo of interior of DESPATCH spray booth shows down draft air flow. Notice the wide working area around the production line.



Write for **NEW Bulletin 51**

Just off the presses! . . . 16 colorful pages of suggestions, tips and ideas on modern ways to achieve better finishes, faster production and smoother handling of metal products . . . at lower cost.



Minneapolis Office—619 S. E. 8th St.
Sales and Service in All 26 Principal Cities

PIONEERS IN ENGINEERING FINISHING SYSTEMS FOR INDUSTRY



as the **SIZZLE** sells the steak
the **DAZZLE** of **Chromium** SELLS THE STOVE

LET

Apollo

SHOW YOU THE PRACTICAL WAY
TO ADD THE SALES-MAGIC OF
CHROMIUM TO ANY APPLIANCE

There's magic customer appeal in the gleaming beauty of chromium. Accessories, ornaments and functional parts finished in mirror-like chrome catch the eye, strike the fancy and win the choice of shoppers.

But what about cost in such up-grading of merchandise? You know piece-plating would price it out of competition. Well, here's where APOLLO ChromSteel—prefinished in sheets—allows an economical approach. APOLLO's large-scale, precision finishing costs demonstrably less than piece-plating.

That's why stove manufacturers are putting more and more APOLLO ChromSteel on the payroll. Adding desirable dazzle to their products they (1) sell more units and (2) realize larger dollar sales per unit. Illustrations to the right show what they are doing:

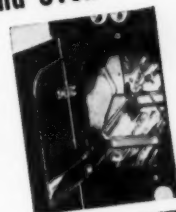
APOLLO Prefinished Steel—CHROMIUM, NICKEL, BRASS and COPPER Finished . . . polished or satin . . . plane, striped or dimensional patterns—serves as effective, functional sales features on countless appliances.

Ask about APOLLO's Product Design Service. Professional sketches economically adapting APOLLO improvements to present or planned products are available to you without obligation.



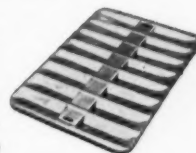
APOLLO ChromSteel Lining on Built-In Rotisserie and Oven

Top, bottom, sides, end and door of glistening, easy-to-clean chromium adds aristocratic touch to the built-in rotisserie on a number of popular priced gas and electrical ranges.



APOLLO ChromSteel Broiler Grill

The efficiency of chromium for grills has been long established. But its present day use as a clincher to sell stoves—at insignificant outlay per unit—has become increasingly popular and successful.



APOLLO ChromSteel Individualized Control Panels



Modern stove makers capitalize on singularly distinctive control panels. APOLLO offers uniquely striped and dimensionally patterned Chrome, Copper or Brass finished steel specially for this purpose.



FAN GRILLS



TABLE BROILERS



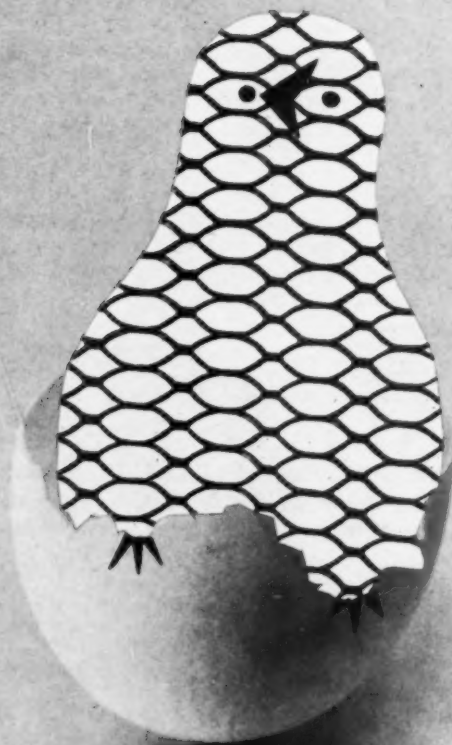
TOASTERS



HEATERS

Apollo METAL WORKS

6684 S. OAK PARK AVENUE • CHICAGO 38, ILLINOIS



B
fo
E
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T



new
ideas
are
hatching
all
over
with
these
new
designs
in



U.S.G. EXPANDED METALS

Break through your design barriers with these four inspiring open mesh designs in U.S.G. Expanded Metals. New RONDO, FESTOON, WAVE-LENGTH and ARMORWEAVE join long-popular EXPAND-X* to provide new freedom in the design, manufacture and sale of products for better living. These versatile new meshes promise quick ac-

ceptance of products that utilize their beauty and charm. Cold-drawn from solid sheets of metal—aluminum or carbon steel—these expanded metals are strong and rigid, yet lightweight and easy to fabricate. Whatever your product, these new designs in U.S.G. Expanded Metals will help to make it *lighter, stronger, more salable.*

UNITED
STATES
GYPSUM

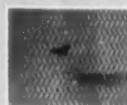
Pioneering in Ideas for Industry



*T. M. Reg. U. S. Pat. Off.

MAIL COUPON TODAY!-----

United States Gypsum, Dept. FM 63
300 West Adams Street, Chicago 6, Illinois
Please send free booklet—"The Shape of Things
To Come"—new expressions in design
using expanded metals.

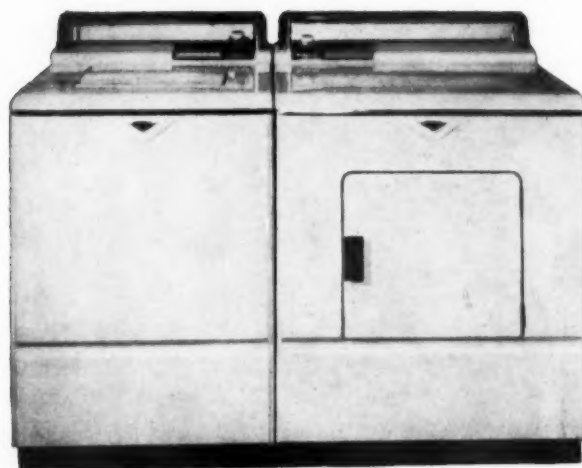


NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

look...

it's

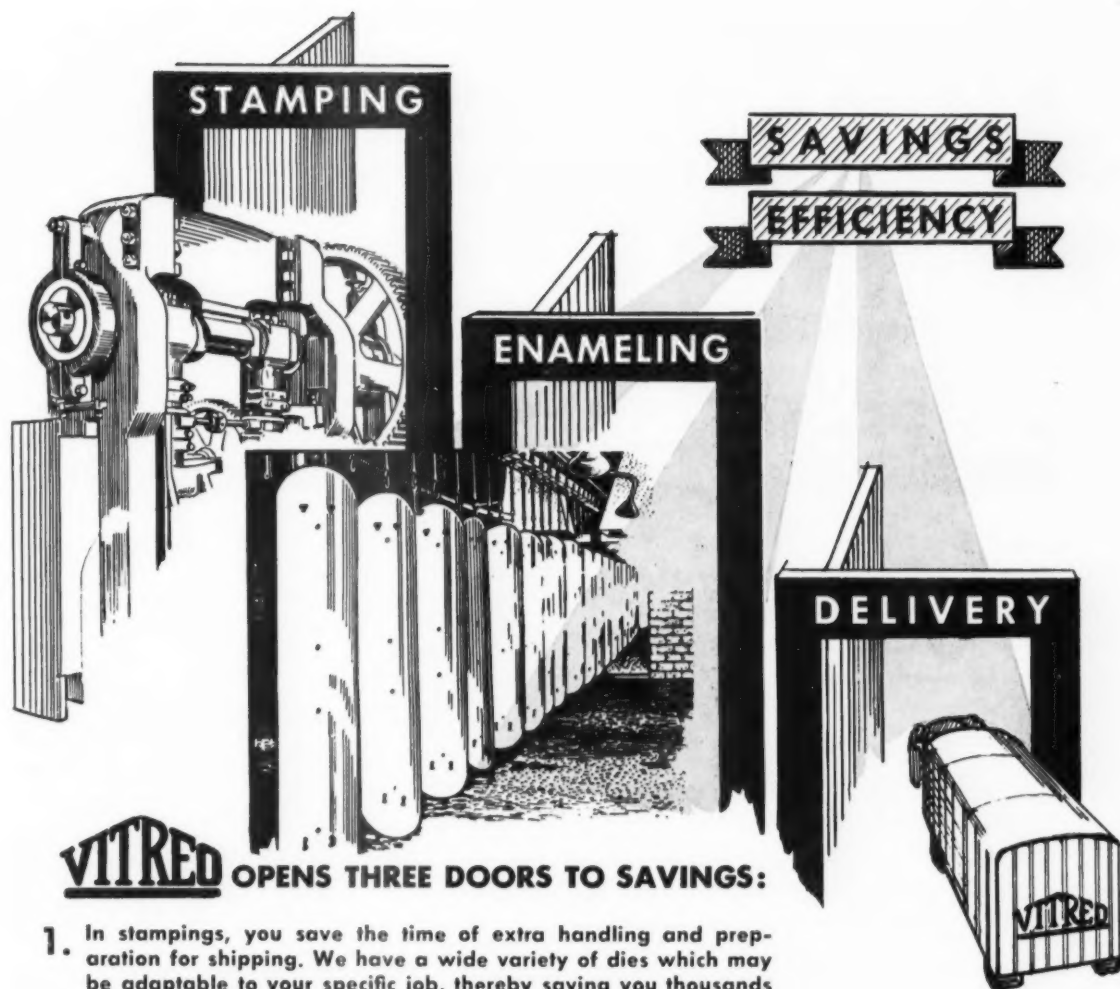
TITANOX®



TITANOX-TG is the titanium dioxide developed specifically for titania porcelain enamels. It yields greater opacity, assures unvarying color uniformity, faster and more economical production.

Through the use of TITANOX-TG, tough, paper-thin porcelain enamels were first made possible. Today, this type of coating beautifies nearly every major appliance. And TITANOX-TG is the logical basis for all such formulations. In porcelain enamels, as in paints . . . plastics . . . paper . . . rubber, TITANOX assures you of the whitest whites, the highest hiding power, and strict uniformity. Titanium Pigment Corporation, 111 Broadway, New York 6, N. Y.; Atlanta 5; Boston 6; Chicago 3; Cleveland 15; Houston 2; Los Angeles 22; Philadelphia 3; Pittsburgh 12; Portland 14, Ore.; San Francisco 7. In Canada: Canadian Titanium Pigments Limited, Montreal 2; Toronto 1.

3788



VITREO OPENS THREE DOORS TO SAVINGS:

1. In stampings, you save the time of extra handling and preparation for shipping. We have a wide variety of dies which may be adaptable to your specific job, thereby saving you thousands of dollars and countless hours of valuable production and engineering time.
2. In enameling, you save by running stampings straight through, and avoid needless handling.
3. In delivery, there is a decided saving in time. Our own fleet of trucks makes shipments from door-to-door with no costly delay. There is no extra hauling or transfer point, and therefore less chance of damaging finished products.

If you prefer, we will pick up parts formed in your plant and enamel them. Remember, — there's no extra charge for return shipments of stampings for enameling.

Should your enameled parts need redesigning, our engineering staff is ready, willing and able to be of assistance. Over 35 years' experience in designing, forming and porcelain enameling are at your disposal. Send samples or blueprints for estimates.


VITREO facilities help you meet the ever-growing demand for porcelain enameled parts by:

1. Acting as a source for stamping as well as enameling.
2. Enameling stampings of your manufacture.
3. Supplementing your own enameling plant.
4. Possibly saving die costs.
5. Quickly solving your color problems.
6. Keeping transportation costs low. (By operating our own trucks, we can often pick up and deliver at the same time, thereby saving most of the cost of one-way transportation.)

VITREOUS STEEL PRODUCTS CO.

BOX 3991 • CLEVELAND 20, OHIO (Factory at Nappanee, Indiana)

MACCO BLU- COAT

- the  ideal
between-operation rust
proofing solution -

PREVENTS RUST

RECORDER precision parts are being given the Macco Blucoat Rust Preventive treatment by one of the nation's leading electronic manufacturers.

GEARS, cut, ground and tempered, are treated with Blucoat to prevent rust during storage, shipping, and assembly.

CARBURETOR bodies and large engine castings being treated with Macco Blucoat to prevent rust after machining and during storage.

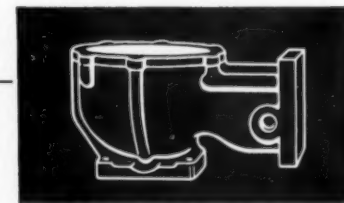
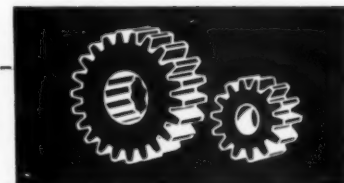
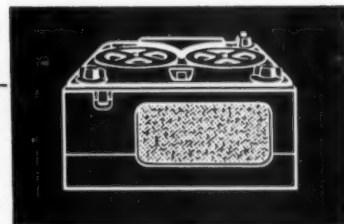
AUTO bodies of some of the world's largest body manufacturers are given the Blucoat treatment to prevent rust after drawing or machining.

5 Reasons for BLU-COAT'S NATIONAL ACCEPTANCE

Macco Blucoat is the amazingly efficient rust preventive used by leading metal processors and fabricating manufacturers everywhere. Endorsed as the only practical method of preventing rust between production operations and assembly—and during transportation and storage.

1. Water soluble—economical, yet extremely efficient.
2. Adaptable to an almost unlimited variety of applications and conditions.
3. Works equally well on steel, cast iron, forgings or die castings.
4. Leaves no oily film. Assures better adhesion. Collects less dust, chips, etc.
5. Blucoat has withstood perfectly a salt spray test of more than 80 hours. Vastly superior to soluble oil. Non-poisonous. No alcohol. Extremely stable.

For the prevention of rust, Blucoat positively has no equal. Whether for the finest of automobile bodies or simply bale tie-wires, Blucoat's versatility makes it most indispensable for any processing plant.



Write today or call a Macco sales engineer

9210 SO. SANGAMON STREET • CHICAGO 20, ILLINOIS

You can make it "Operation Snow-Storm"

list of advantages for fall introduction of appliances, to replace January market showings, makes idea well worth full consideration

by Charles R. Sample • MANAGING EDITOR FOR FINISH

IN THE NEXT THREE MONTHS, 2,000 commercials, spot broadcast from radio stations across the nation, will tell 85% of America's listening public, "Make it a White Christmas—Give Her a Major Appliance."

In that same period, U.S. Steel's Mary Kay and Johnny (remember their broadcast last year from Marshall Field of Chicago?) will urge 25 million televisioners to "Make it a White Christmas—Give Her a Major Appliance."

That important local level

Starting with the first of November, 300 newspapers—including those covering America's top 100 markets—will back up these radio and television "suggestions" with 1000 line ads telling a minimum audience of 75 million to "Make it a White Christmas—Give Her a Major Appliance."

And onto that bandwagon will climb dealers and distributors across the breadth of the land, tying in their local promotion with the "... give Her a Major Appliance," theme. Direct mail promotion, tied in with the theme, local radio and television broadcasts to make the theme penetrate, and point-of-sale as well as car-card advertising to hammer the theme home, will all come into play at the local level—the only place where your merchandise is sold!

A system of strategy

The success of "Operation Snowflake" needs no analysis here. It has already proven itself. What does need study, however, are the pros and cons of appliance manufacturers taking advantage of this ready-made road by introducing their new models so that the "It's New!" excitement could be injected into "Operation Snowflake". Such an impetus could well make "Operation Snowflake" snowball into "Operation Snowstorm" with appliance dealers and distributors (and yourself as well) riding the crest.

What are the advantages in replac-

ing the "January Showings" with a "Fall unveiling"? Why not ride the present "Snowflake" promotion, then continue to introduce new products in January when the "Snowflake" promotion falls off? The contention sounds logical at first analysis, but let's explore the situation further.

First off, January is a 'slide-off' month in selling—what with the family exchequer badly brunted by the onslaught of Christmas purchases. Secondly, the mood of the family has changed to "We've already spent enough for a while—let's pay off our bills." Every reasoning points out that "January Introductions" are an attempt to bounce the ball back up, when it has just bounced high and is on the downswing. An unhealthy climate at the very offset for new promotion!

Reasoning for "Operation Snowstorm"

What are the advantages of fall introduction of new models? First, and it is a primary reason, a tailor-made promotion drive, already proven successful, will provide participating manufacturers with untold millions of dollars in free advertising and publicity. Moreover, *and no advertising dollar or new design can do it as well*, the mood of the people, tempered by ages of like thinking, generates into a driving desire to purchase—a "let's go ahead and buy it" state of mind that could never be purchased with advertising dollars.

The status of our economy

Secondly, the working situation traditionally stabilizes in the fall. The automobile industry, a primary example, has pulled back its full requirements of workers. Its suppliers are going full force and this "Everybody's Working" situation spreads across the national scene.

Summer vacation costs have been dealt with and it's a long while before folk again think "better not buy any-

thing now... we'll need the money for vacation." That mood has changed to "How much can I spend for Christmas?" That mood has changed until it beams directly into your profit columns, directly into your showrooms, directly inside your products.

Some manufacturers are acting

finish editors, in a survey of the industry, were amazed at the number of manufacturers who have already seen the advantages and made the change to coincide with this thinking. Some of the new offerings—including models you yourself haven't seen—are shown in the "Product Pages" of this issue (Home Laundry Section, Pages HL-20 to 27). *finish* editors firmly believe that all appliance manufacturers should seriously study this trend and follow it through.

HOW MUCH STRONGER will be the Christmas promotion by your distributors and dealers if they have new models to talk about instead of those that have been sitting on their floors since January! How much more interest—and more sales—will come about if you make participation in this promotion absolute by backing up your dealer, and your distributor with new products, introduced in the fall and sold through the Christmas season?

Impetus at dealer level

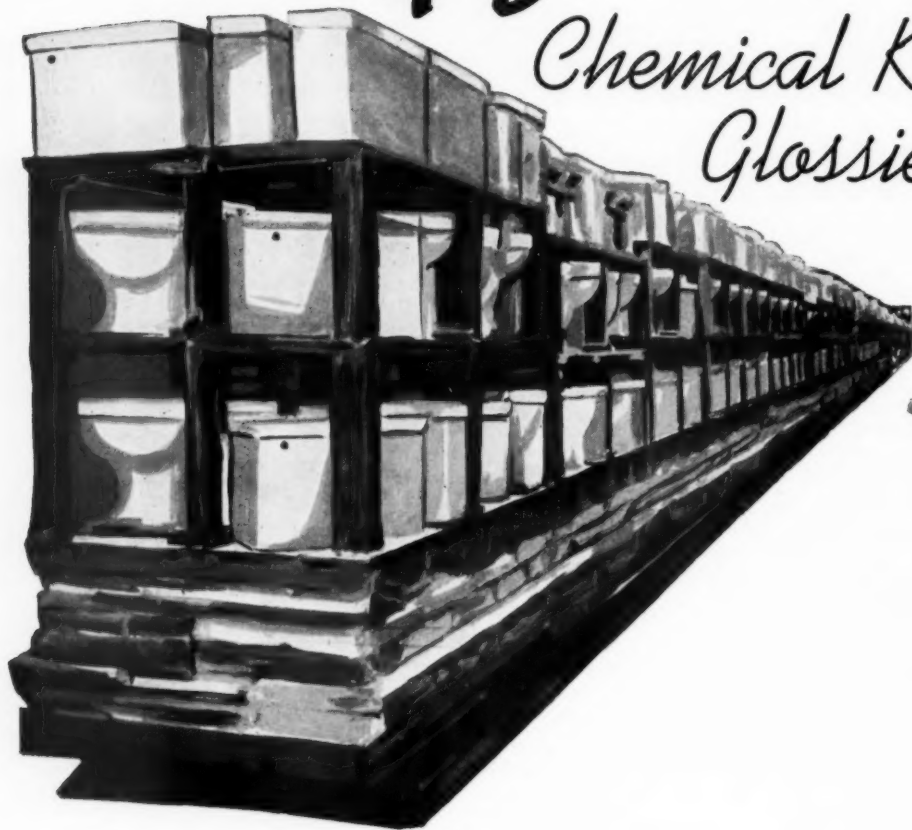
Where is there a better time (even if that major appliance purchase isn't immediate) to make your impression than while people are in an optimum receptive mood, a mood that says "I've got to have one of those."

Even if it isn't a "Christmas present" purchase—the kids always come first!—you can bet your line of products that Mrs. homemaker will be back into the store the minute there is recovery from the Christmas bills. And you've already created the preference!

Do you agree with us?



*Chemical Key to a
Glossier Glaze*



Recent laboratory tests indicate the value of utilizing Lithium Zirconium Silicate in single-fire sanitary ware glazes. Present day glazes of this type, almost universally opacified with zirconium silicate (ZrSiO_4) tend to decrease fluidity at high temperatures. Lithium Zirconium Silicate, by appreciably increasing the high temperature fluidity of the glaze, proves an effective flux. As little as 1.75% $\text{Li}_4\text{ZrSiO}_6$ to the total composition make it a worthwhile investment. Write for our Product Information Sheet on Lithium Zirconium Silicate, or on any of our other nine special ceramic compounds. All are available in experimental and commercial quantities.

... trends ahead in industrial applications for lithium



MINES: Keystone, Custer, Hill City, South Dakota • Bessemer City, North Carolina • Cat Lake, Manitoba • Ames Area, Quebec • BRANCH SALES OFFICES: New York
Pittsburgh • Chicago • CHEMICAL PLANTS: St. Louis Park, Minnesota • Bessemer City, North Carolina • RESEARCH LABORATORY: St. Louis Park, Minnesota

FAHRALLOY...

sells

no popcorn

no peanuts

no razor blades

no chewing gum



**JUST
Heat Resisting
Castings
— NOTHING ELSE!**

Here at Fahralloy we don't have any sidelines. All we do is one thing—make heat and corrosion resisting castings. But we figure that's a full time business in itself. You see, we look at each and every job as something special. We want to be sure it is properly engineered for the service conditions to which it will be exposed. Because of this thorough approach, we've been able to render a service to FAHRALLOY customers far beyond the mere making of a casting . . . one that can be measured in many instances in dollars and cents saved! You'll be pleased with the extra special service that goes with every heat resisting casting that bears the name FAHRALLOY.

Won't you let us serve you soon?



THE FAHRALLOY CO.

150th & Lexington Ave. — Harvey, Illinois

In Canada — Fahralloy Canada, Ltd., Orillia, Ontario

Youngstown Sheets and Strip Have Quality Built-In

*...to Increase Production While
Lowering Your Over-All Costs*

Whether that difficult-to-run part requires deep drawing, forming, stamping or trimming, Youngstown Cold Rolled Sheets and Strip provide the necessary combination of surface finish, tensile strength and ductility to efficiently and economically handle the job.

Satisfied users of Youngstown Sheets and Strip report:

- Increased over-all production
- Lowered reject rates
- Fast and accurate forming
- Lowered fabrication and die costs

Youngstown Sheets and Strip start as top quality open-hearth steel, are cold rolled to exacting tolerances, then annealed and tempered to meet your particular specification. Why not make them your specification and get better parts production at lowered cost.

Our District Sales Office is as near as your telephone; why not call today?



Youngstown

**COLD ROLLED
SHEETS
AND STRIP**

THE YOUNGSTOWN SHEET AND TUBE COMPANY

*Manufacturers of
Carbon, Alloy and Yaloy Steel*

General Offices Youngstown, Ohio District Sales Offices in Principal Cities.

SHEETS - STRIP - PLATES - STANDARD PIPE - LINE PIPE - OIL COUNTRY TUBULAR GOODS - CONDUIT AND EMT - MECHANICAL TUBING - COLD FINISHED BARS - HOT ROLLED BARS - WIRE - HOT ROLLED RODS - COKE TIN PLATE - ELECTROLYTIC TIN PLATE - BLACK PLATE - RAILROAD TRACK SPIKES - MINE ROOF BOLTS

**Steel Kitchens
Feature New
Planning Ideas**

Planning Ideas

[illegible]

Enamel Finish Gives Lasting Beauty

...steel base and wall ca
ished in high quality baked enam
el that has a natural luster and
high resistance to wear. Rec
of the finish can be waxed.
waxing the finish is pro. Rec
mobile is waxed.
is recom

**New Built-Ins
Team Well With
Steel Cabinets**

Steel Cabinets

The current interest in built-in appliances is a logical one where open-plan living is the prevailing theme. Where the kitchen is in full view of living areas is in the house, the kitchen must be as safe and more eye-appealing equipment is apparent.

To achieve the clean, simple lines, greater flexibility of styling and more harmonious security of colors desired, growing numbers of persons are turning to steel cabinets.

Steel cabinets are teamed with steel

Builders Stress

Builders Stress

Kitchens High in

BEAUTY AND DISTINCTION IN NEW STEEL KITCHENS

DATE

STEEL KITCHEN CABINET SECTION

OUR NEW

Favor

Sparkling Colors, Advanced Design Pace Trend to Steel

Unlike automobiles, modern kitchens probably will reach the yearly new model stage, but times reflectants, outfit styling to new consumer fashions, a new era of favor-saving devices probably is in the making. The change is being driven by the steel industry, which is leading the way in the new design and color trends.

Design Trend to Steel

**Steel Cabinets Useful
in Laundry Area, Too**

Plan Kitchen Decoration With Care

Plan Kitchen Decoration With Care

Kitchen Counter Tops in Wide Selection

Kitchen Counter Tops in Wide Selection

September is steel kitchen cabinet month!

SKCMA going all out in promotion — see newspaper above — with national advertising and local promotion coordinated efforts

by Arthur J. Tuscany, Jr. • EXECUTIVE SECRETARY, STEEL KITCHEN CABINET MANUFACTURERS ASSN

WE know about the superiority of steel kitchens . . . you know about the superiority of steel kitchens . . . and it's high time that the millions of potential retail customers know the superiority of steel kitchens, too." That's the the thinking of the steel kitchen cabinet manufacturers who are going all out to make September — *the Steel Kitchen Cabinet Month* — one of the most powerful methods of telling the story to the greatest number of people.

The success of this annual promotion has already been proven, with the results of the two previous annual special promotions as the indicators. Moreover, we've had the good fortune to have September designated as the month for a concentrated emphasis on remodeling by the thousands of companies supporting *Operation Home Improvement*.

A special newspaper supplement — see photo above — has been put into the hands of every member manufac-

turer. Check lists for advertising programs, direct mail campaigns and dealer display kits, all prepared by SKCMA, are in the hands of our members' promotion people and will be working all month to build up the interest and awareness of our line of products. Members of SKCMA have scheduled national advertising in consumer and trade magazines for September to further the plans. All in all, we're hoping that new records will be set for such a promotion.

ROPER

TRADE MARK
REGISTERED IN CANADA

GEORGE REFRIGERATOR COMPANY
GREENVILLE, MICHIGAN

THE Sunray STOVE CO.

**SEERLESS
PRODUCTS CO.**

Caloric
master line of line appliances

THE *Enterprise* FOUNDRY COMPANY LIMITED

UTILITY APPLIANCE CORP.

DM DETROIT-MICHIGAN STOVE COMPANY

**Gurney
PRODUCTS**

PETERSEN

Preway Inc.

Premier

Admiral

Enterprise

MOFFATS LIMITED
WESTON • ONTARIO • CANADA

DIXIE PRODUCTS, INC.

Kelvinator



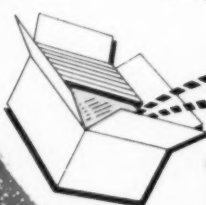
CROWN • STOVE • WORKS

St. Vernon Furnace & Mfg. Co.
HEATING AND COOKING EQUIPMENT

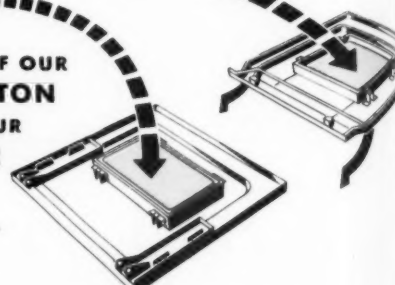
**GENERAL
STEEL WARES**

Hotpoint Co.

**EAGLE RANGE & MANUFACTURING
Company**



**OUT OF OUR
CARTON
INTO YOUR
DOOR**



Alternate methods of attachment
may be used.

These well known names and
trademarks represent some of the
leading manufacturers of gas and
electric ranges currently using
PERMA-VIEW windows.

PERMA-VIEW

THE BEST SALESMAN FOR YOUR BUILT-IN OVEN...

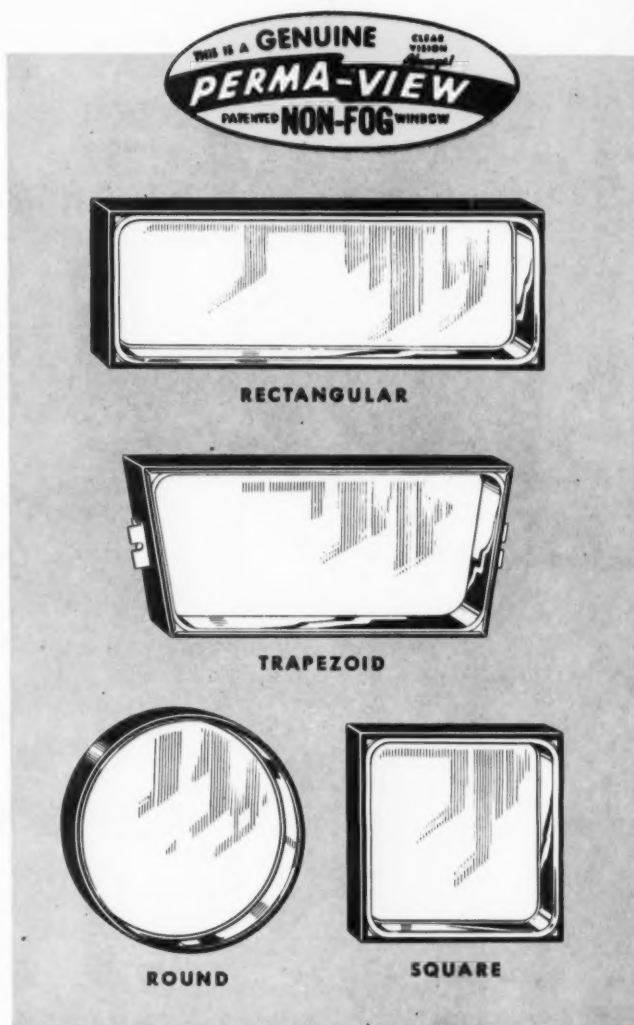
With the growing trend to built-in appliances more and more leading manufacturers of built-in oven units have turned to PERMA-VIEW "the window you can see through always."

The strong steel encased, double pane PERMA-VIEW window incorporates the finest quality heat resisting glass. It is mechanically sealed to prevent infiltration of vapors and to eliminate "fogging." This "No-Fog" window meets the constantly growing demand for "visible baking."

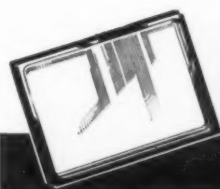
As a practical, economical and effective sales feature PERMA-VIEW can be your best salesman. Be sure you take advantage of this sales feature in your new built-in models.

The PERMA-VIEW window is pre-engineered, and comes to you ready for immediate installation in your range. "Out of our carton into your door." Let our specialized production lines serve as a part of your subassembly facilities. Phone or write us for complete details on the ease and economy of adding this important sales feature.

A phone call or letter will bring an experienced engineer to your plant for prompt consultation. PHONE: Market 4-1591 WALLED LAKE, MICHIGAN



WE CAN MANUFACTURE ANY SHAPE, ANY SIZE, ANY THICKNESS TO MEET YOUR ENGINEERING REQUIREMENTS. RECTANGULAR — ROUND — SQUARE — TRAPEZOID.



MILLS PRODUCTS INCORPORATED

1015 WEST MAPLE ROAD

WALLED LAKE, MICHIGAN

SPECIFICATION FINISHES

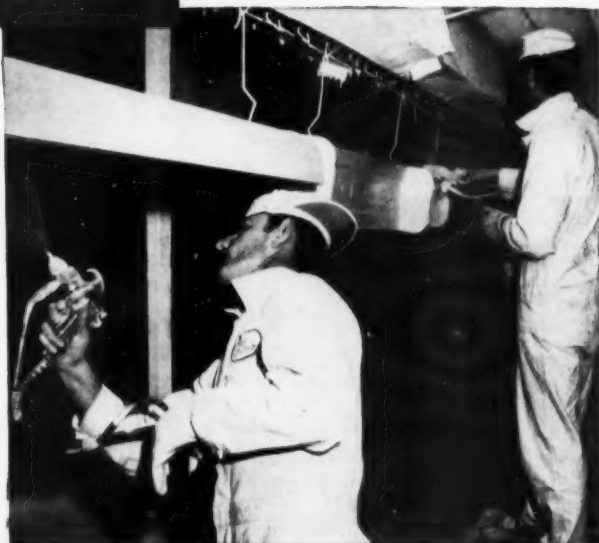
by



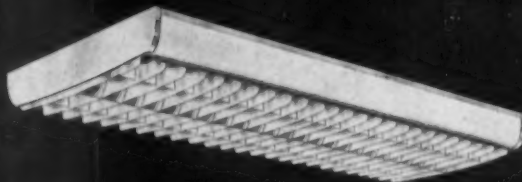
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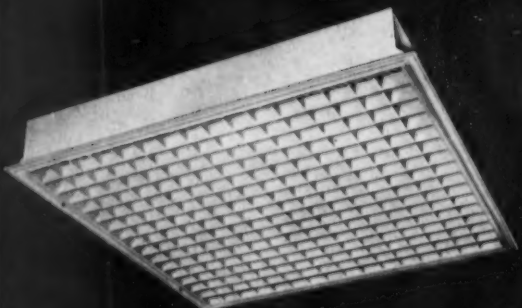
MANUFACTURERS OF INCANDESCENT
AND FLUORESCENT LIGHTING EQUIPMENT



DIRECT-INDIRECT FLUORESCENT LUMINAIRE



4-LAMP DIRECT FLUORESCENT LUMINAIRE



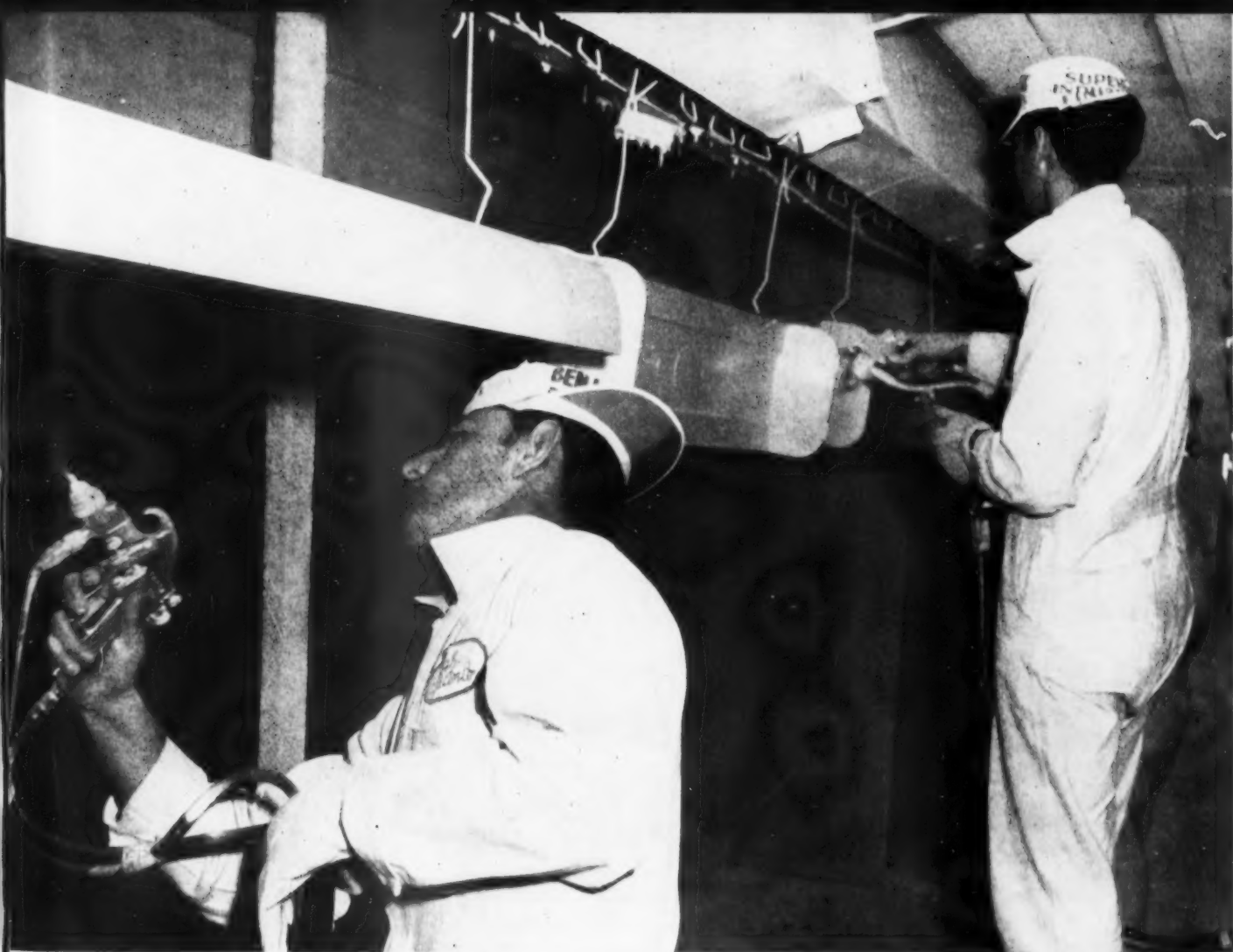
FLUORESCENT TROFFER WITH EGG CRATE LOUVER CLOSURE

With all Pittsburgh Reflector products, specification finishes with sales appeal are positive requirements. In the finishing of modern lighting equipment, Sipes White Baking Enamel affords a quick-drying, easy-to-apply finish — "tailor-made" for production line operation. In addition it's properties of mar resistance, high reflectance, color uniformity and permanence build super sales appeal into the finished product. Forward thinking executives know that Sipes Specification Finishes meet all these demands . . . plus the added feature of maximum economy.

Sipes modern research and test facilities are at your service. Let us solve your finishing problems.



JAMES B. SIPE AND COMPANY
INDUSTRIAL DIVISION
PITTSBURGH 16, PENNSYLVANIA



“Hot Spraying” at Pittsburgh Reflector.

a report on this expanded and modernized Pennsylvania light fixture company's new cleaning facility and methods for paint application

by Robert C. Zinsmiester • PLANT MANAGER

**Exclusive
feature
finish**

SEVERAL PRIME FACTORS complicate the responsibility of the Pittsburgh Reflector Company, Irwin, Penn., in the manufacture of its lines of fluorescent and incandescent lighting fixtures. In the paint operations, color uniformity and long retention of color are needed, since the proper function of the product requires durability of the reflectance qualities that are inher-

ent in the new product. Pittsburgh's light fixtures are built for years of use and, always visible, they are subject to frequent inspection.

Moreover, new fixtures are often installed alongside fixtures purchased from the company earlier, making direct comparison a matter of course. This situation demands that the product finish not only has durable color retention but must match up with products produced earlier, requiring color uniformity from batch to batch.

Providing continuing insurance that their products will stand up to these requirements, the Pittsburgh Reflector management has a constant program of upgrading their facilities, taking full advantage of developments in equipment and supplies. Moreover, the operation is under almost constant expansion, and critical controls have been set up to assure no variation in quality of product or process of manufacture during the expansion.

Just this month, the plant put into

COMPLETE

Finishing SYSTEMS

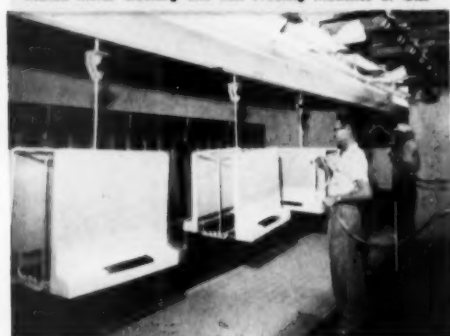
... for ENAMELS • LACQUER • PAINT • VARNISH



Mahon Metal Cleaning and Rust Proofing Machines at G.E. One is Seven-Stage for white parts. The other Six-Stage for black parts.



One of the two Mahon Dry-Off Ovens at the Exit End of the Mahon Metal Cleaning and Rust Proofing Machines at G.E.

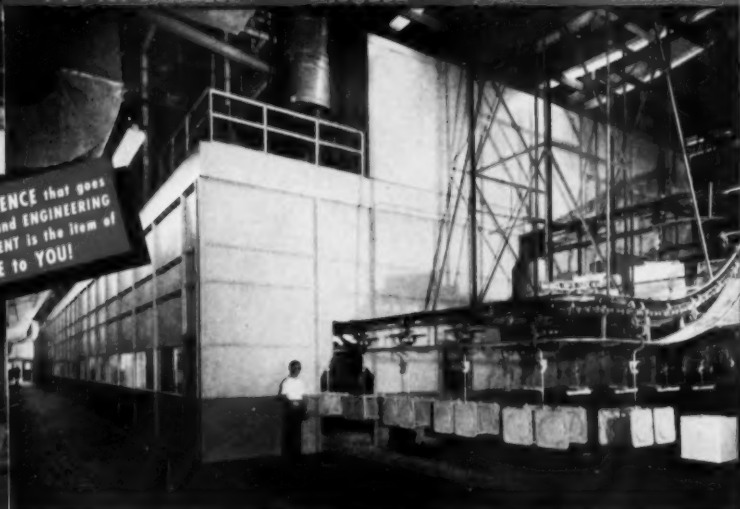


One of two Mahon Hydro-Filter Spray Booths in the Complete Mahon Finishing System at General Electric Co., Louisville, Ky.



Through the glass you see the interior of the Mahon Automatic Electrostatic Spray Booth, where finish coat enamel is applied.

... the EXPERIENCE that goes into the PLANNING and ENGINEERING of MAHON EQUIPMENT is the item of GREATEST VALUE to YOU!



General view showing exterior housing of the Complete Mahon Finishing System in General Electric's Home Laundry Equipment Department at Louisville, Kentucky. This Housing encloses all processing and painting operations. Finish Baking Ovens are located above the enclosure.

More and More HOME APPLIANCES Receive Their FINE FINISH in Modern, COMPLETE MAHON FINISHING SYSTEMS!

In the Home Laundry Equipment Department of General Electric Company, Louisville, Kentucky, a Complete Mahon Finishing System produces the fine finish demanded by one of the world's largest home appliance manufacturers. The system includes an enclosure, which houses all metal processing and painting equipment, with Finish Baking Ovens, Heating Units, Filtered Air Supply and Exhaust Fans located above... it is a complete, ultramodern finishing system combining and coordinating all major units of equipment and other essential facilities into an efficient, smooth-running, economical production operation. There are actually three finishing lines in this system: One is a flow coating line for black parts. Another flow coating line applies the first coat of enamel—both Flow Coaters are equipped with controlled atmospheric paint surface conditioning chambers in the drip zone. The third line is a combination manual and automatic electrostatic spray for the finish coat of enamel. If you are contemplating new finishing equipment, you, like thousands of other quality-minded manufacturers, will find that Mahon engineers are better qualified to advise you on both methods and equipment requirements... and better qualified to do the all-important planning, coordinating and engineering of equipment—which is the key to fine finishes at minimum cost. You will find also, that Mahon equipment is built better for more economical operation over a longer period of time. Mahon will furnish your complete system on one contract... undivided responsibility for the entire job safeguards you against complications which may upset your production plans and subsequent schedules. See Sweet's Plant Engineering File for information, or write for Mahon Catalog A-656.

THE R. C. MAHON COMPANY • Detroit 34, Michigan
SALES-ENGINEERING OFFICES in DETROIT, NEW YORK and CHICAGO

Engineers and Manufacturers of Complete Finishing Systems—including Metal Cleaning, Pickling, and Rust Proofing Equipment, Hydro-Filter Spray Booths, Dip and Flow Coaters, Filtered Air Supply Systems and Drying and Baking Ovens, Cooling Tunnels, Heat Treating and Quenching Equipment for Aluminum and Magnesium, and other Units of Special Production Equipment.

MAHON



COMPLETELY NEW five stage cleaner was installed at the Irwin, Penn., plant. Parts from fabrication are hooked on the chain that feeds directly into the first stage. Parts processed through this combination surface treatment are given a corrosion-resistant surface that allows direct cover coat application.

HOT SPRAY CONTINUED

operation a second conveyor set-up for handling their enlarging volume through the processes of fabrication, painting and assembly. Earlier this year, a new five-stage cleaner was installed, and the "hot spray" process for paint application makes another recent and highly satisfactory method of operation.

Fabrication set-up at Irwin

In the fabrication of their line of "egg crate" fluorescent fixtures and luminescent fixtures, three shifts are required for moving the metal through the department. Facilities for the operation include press brakes ranging in size from 60 to 200 tons and presses ranging from 35 to 90 tons. The round-the-clock fabrication is needed to supply the two shifts in the paint section and the two shifts in assembly, working on a five day week.

Fabricated parts are delivered to the hook-up point of the continuous mono-rail system in skid lots. One man is

charged with keeping the chain loaded. Since the fabrication section is at an elevated level, the chain rides in the alley way between the cleaning tank and the loading platform and is within easy working reach of the loader. Chain speed ranges from 10 to 30 fpm, depending upon the size of the parts in process.

Metal Cleaning processes

The five stages of the 108' long cleaning facility are: (1st) slightly acidic cleaner, solution temperature 150-160°F; (2nd) warm water (135-145°F.) rinse; (3rd) phosphatizing solution at 140-150°F; (4th) cold water rinse, and (5th) the dilute chromate acid rinse bath. Parts processed through this combination surface treatment are provided with a corrosion-resistant surface, which is sufficiently treated to allow direct application of the cover coat.

At Pittsburgh Reflector, the first cleaner batch is dumped every 21 days. The phosphatizing solution is drained,

sludge removed and recharged every two weeks. The zinc chromate bath is replaced weekly. All these operations are done during the weekend, when full maintenance procedures are carried through on a regular every-weekend basis.

Dry-off cleaned parts at 320°

Parts leaving the cleaning tank travel upward on a 45° angle to the overhead dry-off oven. This 55' long receptacle is set at a 320°F temperature, with heat supplied by bake oven waste heat augmented by gas burner equipped indirect heating auxiliary heaters. Chain speed through dry-off ranges from 10.3 to 30.3 fpm, depending on size of ware in process.

Paint mixing operation features

All paint used in the manufacturing operation is mixed in an enclosed balcony area just adjacent to the spray areas. Two white coat tanks and one color coat holding tank supply the needs of the applicators. A two-color recirculating system, incorporating a plant-designed three-way valve, an inter-tank set-up for quick change-over and a line filter arrangement through which all paint passes, is included in the mixing facilities. The paint is supplied to the tanks by gravity feed.

With the recent addition, two mono-rail conveyors now carry the parts through the paint booth areas. One line is used exclusively for the larger parts in white. The other line is for both white and colors for the smaller parts. Each of the five applicators are equipped with two guns, one for white and one for colors, and work both lines.

Successful "Hot-Spray" operation

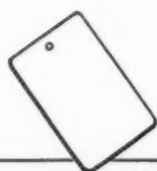
Full utilization of the low pressure hot spray principle of paint application has proven highly successful for the company. In their set-up, a controlled uniform hot water recirculating system provides a continuous flow of hot water through the heat exchanger system and along the spray gun hose.

Three main elements make up the "hot spray" facility: a thermostatically controlled water heater equipped with water pump (the only moving part in the entire set-up), a heat exchanger and a heat jacketed hose. The water heater is a standard type. The special exchanger is well engineered. The hot water from the heater flows around a multitude of ribbon-like passages through which the paint passes and, in process, is brought up to the desired temperature in a matter of seconds. The

to Page 33 →



When you want close quality control,
you use Bonderite under the paint.



"GOLD STANDARD"

PANELS are Bonderized
Parker's Customer Service
lab prepares Bonderite-
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The secret of Bonderite's uniform results begins in Parker manufacturing plants, where each lot of chemical is numbered and tested. A sample

is kept permanently. Operating procedures for processing are simple, easily followed, easily checked. Long experience has smoothed out all the kinks!

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surfaces

TROPICAL
heavy duty maintenance
paints since 1883





ON-THE-CHAIN inspection of the baked ware is accomplished in a special staging area. The parts are then taken off the hooks and stacked onto pallets for movement into the assembly areas. Note the double hook-up on the oven chain. The Pitts-

burgh Reflector Company has a well-earned reputation from builders and architects across the country for consistently producing quality products with color uniformity and long color retention, of vital importance in their products.

HOT SPRAY CONTINUED

system, as designed, eliminates any possibility of overheating or paint hardening. Once the paint is heated, it flows directly through a heat jacketed hose, allowing the applicators to work some distance from the actual heat exchanger equipment.

Spray paint at 150°F

In the Irwin operation, the paint, at point of departure from the gun, has a temperature of 150°F. However, due to the atomization, the paint at point of application to the metal has a temperature of about that of the room or 80°F.

The advantages that Pittsburgh Reflector has found in this type of process can be readily ascertained. A greatly reduced amount of thinner is required, since the heat decreases the viscosity of the resinous vehicle, allowing them to flow easily through the apparatus and out the gun nozzle. Moreover, the jets of air from the gun nozzle, in atomizing the hot paint, also chill it, causing the paint to become viscous in travel, allowing for a thicker film to

be applied to the metal with a great resistance to runs or sags.

Advantages of system

This is especially valuable at this plant, where there is no humidity or temperature control for the spray booths. Here, the "hot spray" process eliminates the constant gun and pressure adjustments that might, and often are, necessary when the atmospheric and room temperature changes during the

day cause a wide variation in the viscosity of paints being used.

Painted parts continue on the chain conveyor, again traveling upward on a 45° angle until they reach the 3-pass bake oven, built on the roof of the plant. The parts travel through the "tight S" type oven where they are subjected to a temperature of 325° for a period of 12 minutes.

On-the-chain inspection

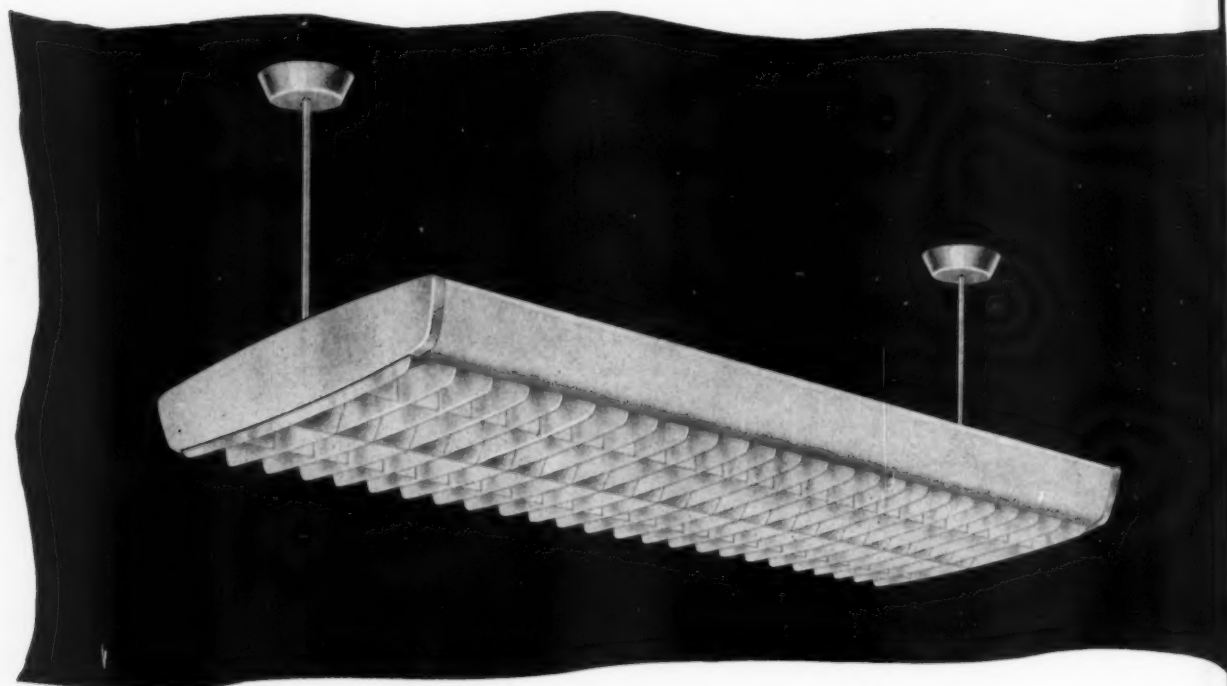
The baked ware then returns to ground level, where the parts are on-the-chain inspected, then unhooked and stacked on pallets, using corrugated protectors between each level. They are then delivered to the marshalling area by fork truck. Close programing controls for the fabrication and metal treatment departments eliminate the need for any storage, excepting the small parts which are made in job lots in slack periods and stored until needed.

Personnel at Pittsburgh Reflector Co. include H. C. Zinsmiester, president; J. C. Sullivan, vice president; R. C. Zinsmiester, plant manager; LeRoy Ward, plant superintendent; and Arthur E. Aultman, paint foreman.

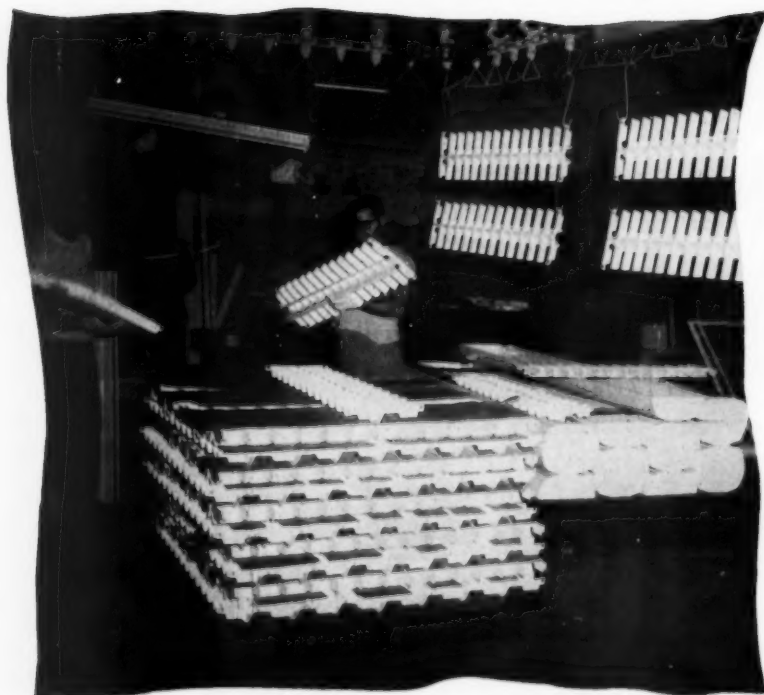
"HOT SPRAY" ADVANTAGES

Readers seeking more information on "Hot Spraying" of enamels as discussed in this article should watch future issues of *finish* for more detailed information and editorial reports. Of note here is that at the Irwin, Penn., plant, the "hot spray" system works at a 140-150°F temperature rather than the higher temperatures discussed in earlier articles. There is a good basis for lowering this 'hot' temperature, and the studies surrounding the development of the application system as used at Pittsburgh Reflector will be a feature of an upcoming issue of *finish*—The Magazine of Appliance and Metal Products Manufacturing.

A BETTER WHITE



Above, the 4-Ft. Pittsburgh "Arthur" Luminaire finished with KOROLITE Enamels. Lower left, Enamel-baked fixtures are inspected on-the-chain, and stacked onto pallets. Lower right, hot spray finishing process as used at Pittsburgh.



Korolite Enamels are produced by the Korolite Division of United Wallpaper, Inc.

ENAMELS COME TO LIGHT

THAT'S WHY PITTSBURGH REFLECTOR* CHOSE

Korolite ENAMELS

BENJAMIN FRANKLIN Paint and Varnish Co., supplier of KOROLITE

High Reflectance Baking Enamels, met a three-fold specification at Pittsburgh

Reflector: (1) Uniform high reflectance, (2) excellent color and color retention and (3) batch-to-batch color uniformity.

Specially formulated KOROLITE Enamel provides the highest coefficient of reflectivity for the Pittsburgh fluorescent fixtures. Tailor-made vehicles

insure retention of these reflectance properties upon aging of the enamel.

KOROLITE enamels are formulated to produce excellent whiteness, gloss and

other film properties. Proper selection of raw material and quality control in the plant results in retention of these properties upon aging.

New fixtures are frequently added to existing lighting facilities so that color uniformity is essential. Rigid color matching and quality control at the

BENJAMIN FRANKLIN plant insure complete uniformity in this exacting field.

*PITTSBURGH REFLECTOR CO., IRWIN, PA.

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WALLPAPER, INC.

ILLINOIS PAINT WORKS
Chicago, Illinois

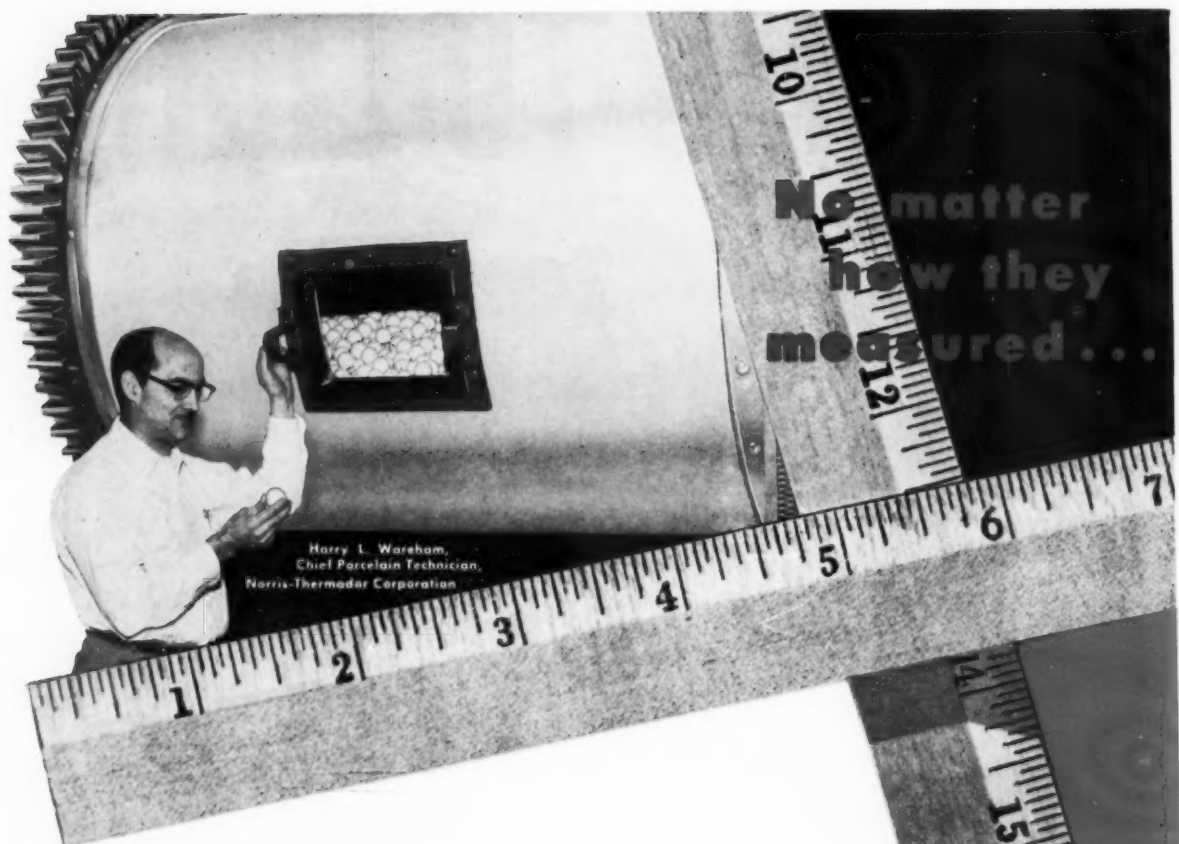
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Chief Porcelain Technician,
Norris-Thermador Corporation

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See our catalog
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GENERAL INDUSTRIAL DIVISION

September • 1956

**10TH ANNUAL
SPECIAL SECTION**

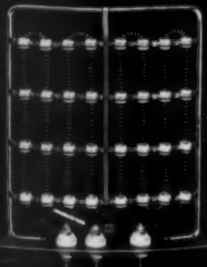
HOME LAUNDRY APPLIANCE INDUSTRY

Finish

THE MAGAZINE OF
Appliance AND
Metal Products MANUFACTURING

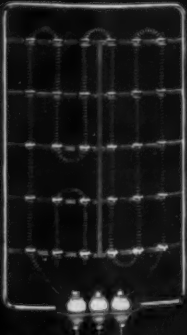
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$$\text{TEP} = \frac{\text{Minimum}}{\text{Micro Amp. Leakage}} + \frac{\text{Long Life}}{\text{Low Maintenance}} = \text{Top Quality}$$

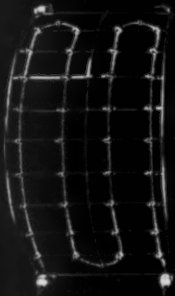


A Maytag Automatic Clothes Dryer Unit


There are good reasons why a big majority of the appliances on the market today, that include electrical heating elements, are equipped with TEP products. Perhaps one reason is that we specialize in the open-coil heating element business and we like to believe have the necessary know-how to serve this field efficiently. Whenever you have a heating or intricate wiring problem we suggest you contact us for a possible solution.



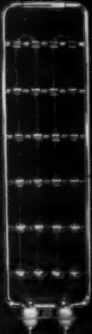
A TEP Manufactured Unit for an ABC Clothes Dryer



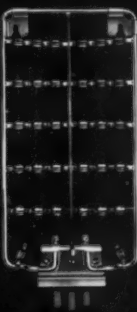
TEP "Floating Construction" is also included in the Lovell Dryer System



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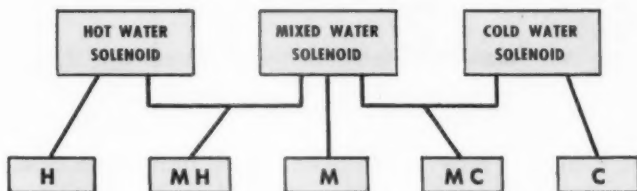
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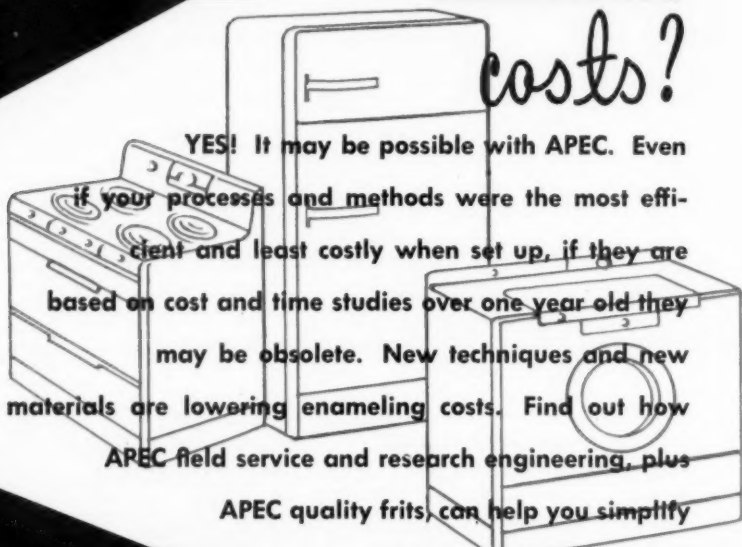
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THE PROBLEM: To create high quality, light weight, non-corrosive, economical parts for the new Wash-N-Dry Laundromat.

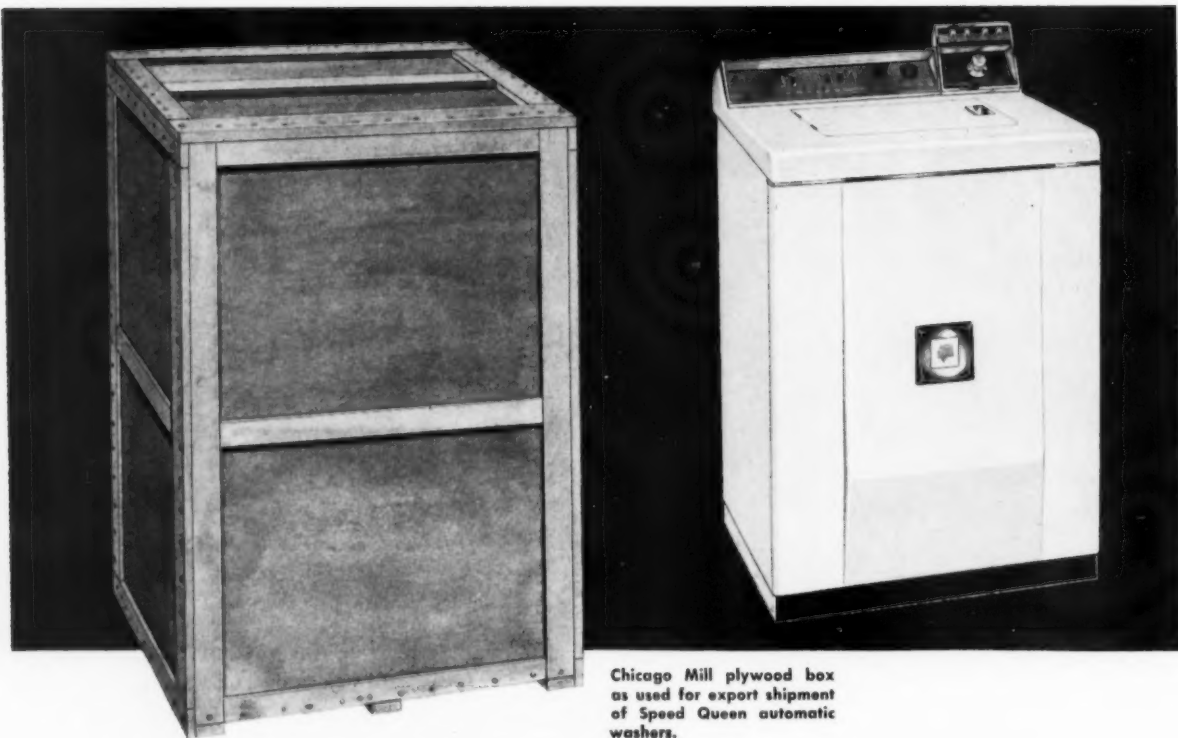
THE SOLUTION: Through the combined efforts of *General Industries'* Design and Engineering Departments and the Engineering and Purchasing Departments of Westinghouse, component parts molded of special plastic material were developed . . . which provided better performance at lower costs than the metal parts they replaced.

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PLASTICS DIVISION - DEPARTMENT P • ELYRIA, OHIO



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as used for export shipment
of Speed Queen automatic
washers.

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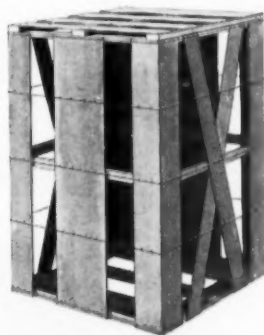
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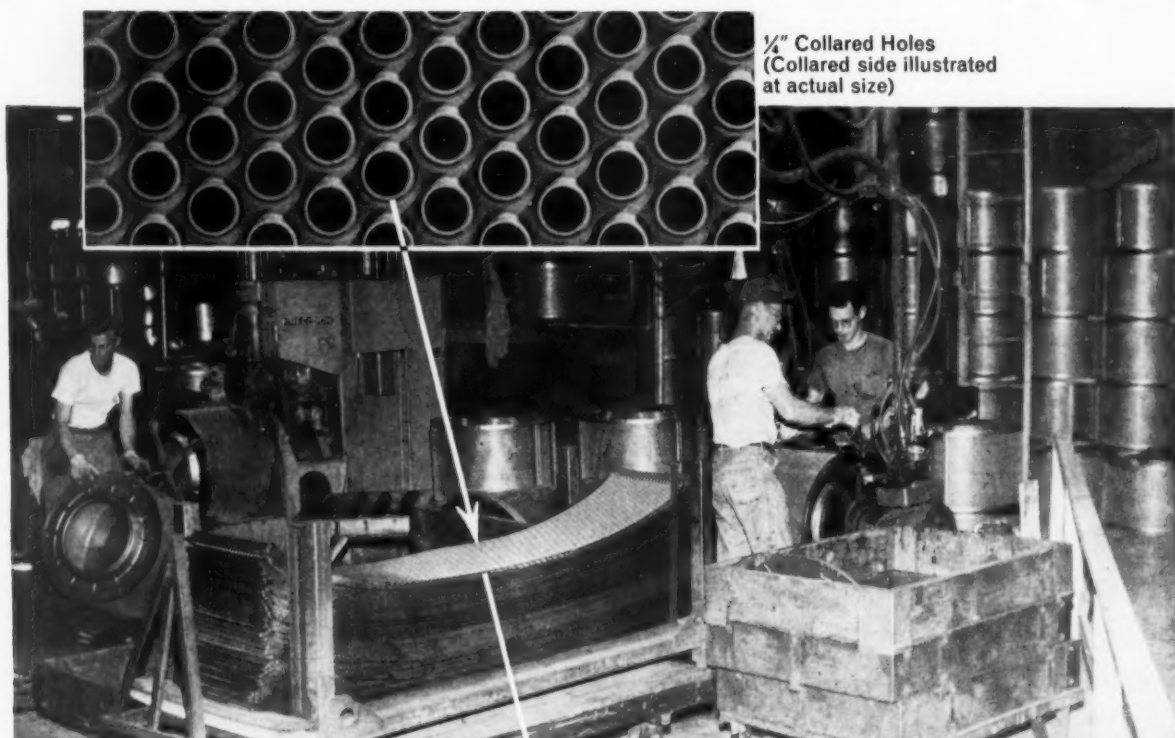
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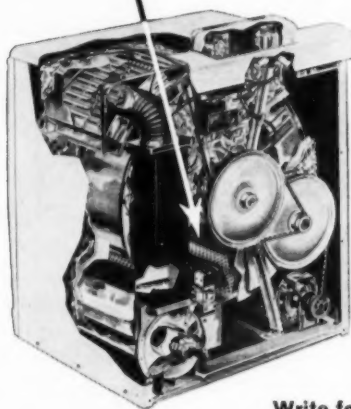
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THE 10TH ANNUAL SALUTE TO THE HOME LAUNDRY APPLIANCE INDUSTRY

PRESIDENTIAL SALUTE

THROUGH the years, *finish* magazine has been making a very real contribution in bringing to its readers news and developments pertinent to our industry. This has been accomplished not only through annual special sections, but also through continuing editorial attention in every issue. For a number of years, *finish* was the only magazine at the manufacturing level to attend both the annual and summer association meetings and then to devote multiple page space to the activities of the association and the industry.

Since 1947, a complete section of the publication has been devoted each year, in September, to this important segment of the appliance field. Each year since, this special section has chronicled the advancements in home laundry appliances, reported

the activities of AHLMA committees and carried the spirit and activities of the association meetings in its columns.

On behalf of the officers, directors, members and staff of AHLMA, I would like to commend the editorial staff of *finish* for its attention and development of this annual salute to our growing industry. We are also indebted to the many contributing authors who, at the request of the *finish* editors, worked in the preparation of material for this special section.

B. J. HANK
President

American Home Laundry Mfrs. Assn.

FROM THE EDITOR'S DESK

SINCE the inception of *finish* in 1944, the editorial staff has worked closely with the officers, committee chairmen and staff

of AHLMA in the interests of the entire home laundry manufacturing industry. All interested manufacturers, regardless of association affiliation, are included in this continuing study.

This, the 10th special section, was designed to condense the "meat" of home laundry appliance progress (as well as to mark new trails) in a single digest report. This year's report comes at a time when these manufacturers are "carrying the ball" for the entire appliance industry.

Our editors are appreciative of the wholehearted cooperation by the AHLMA staff, the active and associate members and all the manufacturers of the industry who cooperated in the preparation of this salute to a growing industry.

DANA CHASE
Editor & Publisher

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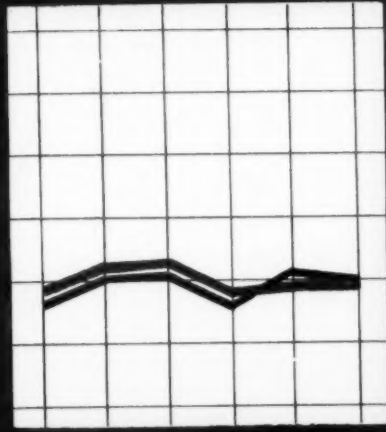
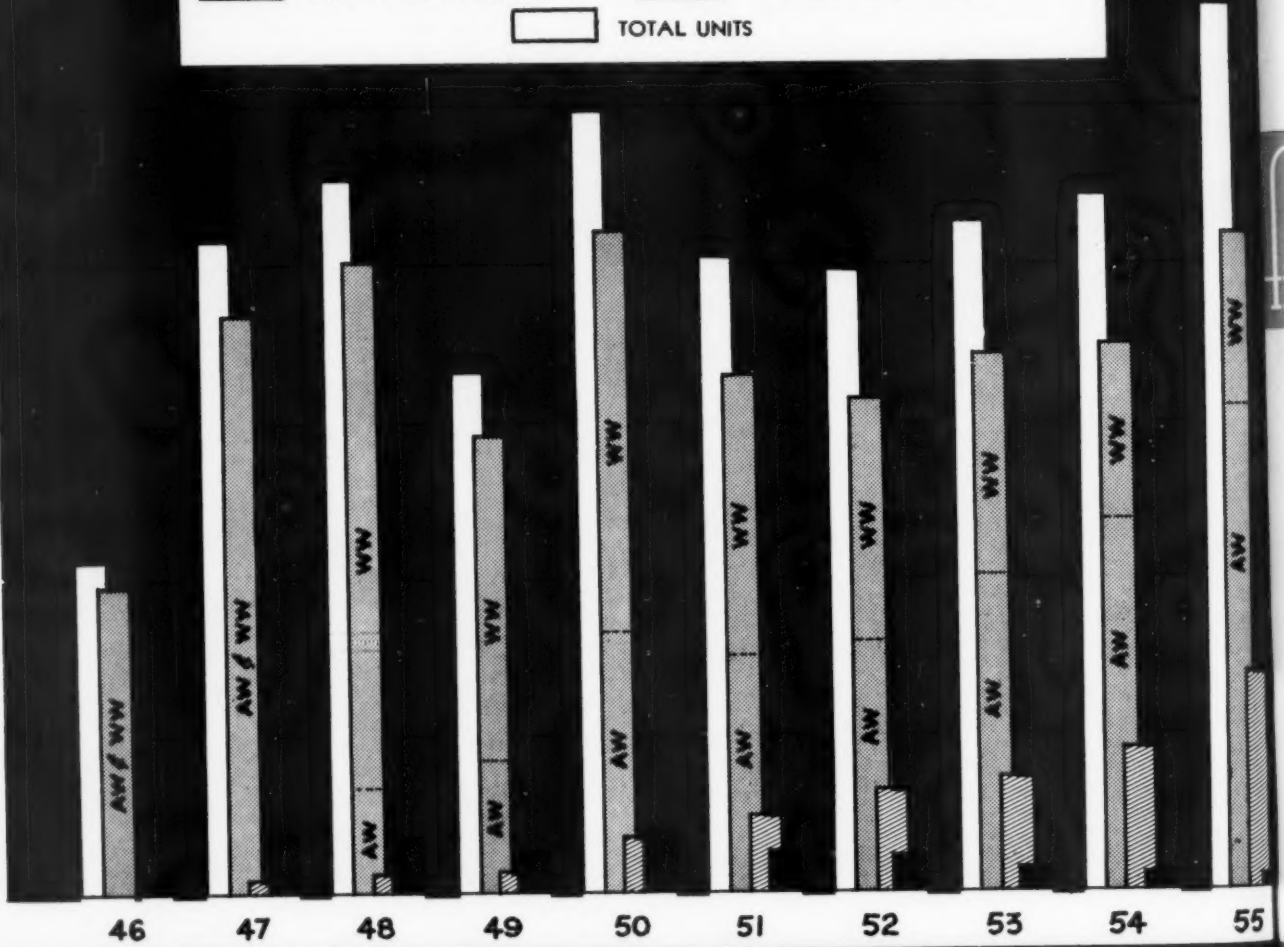
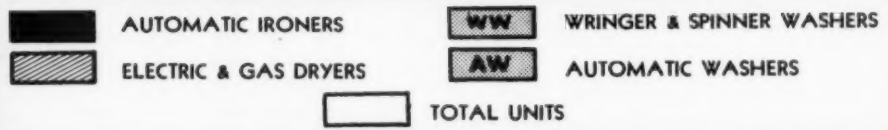
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YEAR-END LAUNDRY APPLIANCE FACTORY SALES



A look at the domestic picture

monthly industry census explained by Baumgart with an analysis of the industries development and a close look into the future

by *Guenther Baumgart* • EXECUTIVE DIRECTOR AMERICAN HOME LAUNDRY MANUFACTURERS' ASSN.

Exclusive
feature

finish

THE HOME LAUNDRY manufacturing industry is indeed fortunate in its statistical program in that nearly 100 per cent of the industry is actively participating in it through Association membership. This results in valuable data being available to manufacturers. It is a veritable census of the industry each month.

Let us look at the most generally used data thus produced and see what it can be made to mean. For ease of understanding, several graphs on these pages help illustrate certain points.

Statistics handling procedure

All the data from which these graphs are made is reported by industry members to a certified public accountant for consolidating. Only industry-wide totals are released. No individual company data is ever revealed; the rules are as strict, or more so, than federal government rules.

After all the data is in, reports are prepared and mailed to members. A press

release is sent to the trade and business press giving the detail by kinds of products and totals. Comparisons with last month, last year, and year to date are given in both total units and percentages for quick interpretation.

Will 1956 be best year?

Note in the chart giving annual data that since World War II, home laundry appliance factory sales have set many new records. All-time peaks were accomplished in 1948, 1950 and 1955. Will one be set in 1956? That remains to be seen. As Assn. President Hank pointed out in his summer meeting talk, the best forecasters in the industry think "yes". It is certainly possible.

The first six month's total factory sales of home laundry appliances in 1956 is 6% greater than were sales in the first six months of 1955. However, May and June, 1956, were slightly lower than those months in 1955. The last few months of 1955 were very large and will be hard to beat in 1956. But this was true also when we were comparing 1955 with 1954.

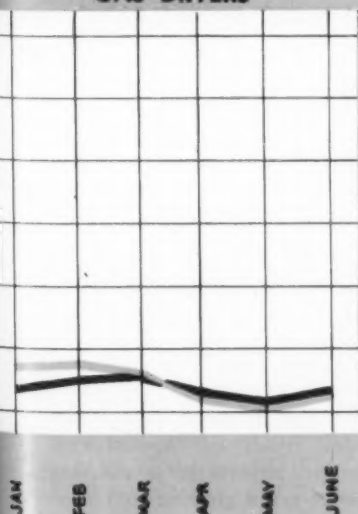
As also reported in June by President Hank, retail sales, the ultimate test of home laundry appliance marketing, are holding enough above 1955 to be significant. Even though it is highly improbable that every year will be a new peak, we have a good chance of beating 1955 and establishing a new record in 1956. It certainly presents a challenge and an opportunity for the industry.

In an article of this sort, one cannot help but call attention to the fact that in addition to the values of 100% participation in statistical programs, this comprehensive coverage is comparably valuable in all other phases of association activity. Not only are sales growing domestically, but AHLMA is also growing in its services and aid to members. In the technical management services, other than market research, it provides a broad base and a wonderful resource for gathering industry-wide information.

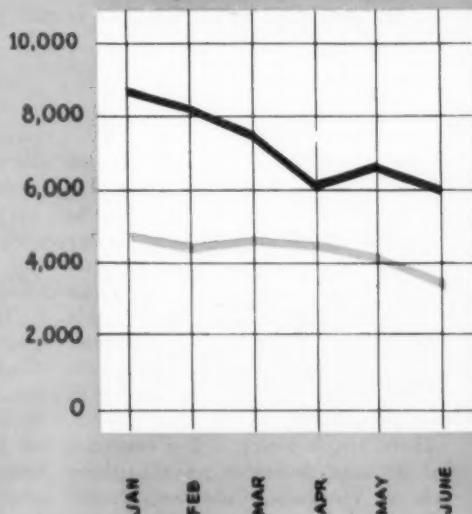
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SALES FOR HOME LAUNDRY EQUIPMENT

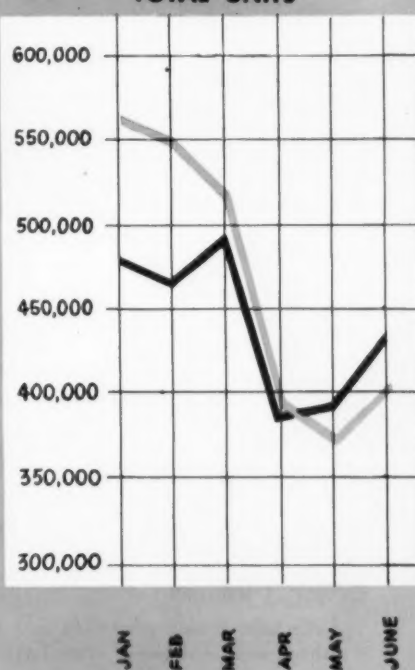
GAS DRYERS



AUTOMATIC IRONERS



TOTAL UNITS





THE WORLD SITUATION

VENEZUELA — good potential market

CUBA — good potential market

PUERTO RICO — good potential market

PERU — free import on limited quantities

COSTA RICA — free import, limited quantities

GUATEMALA — free import, limited quantities

PANAMA — free import in limited quantities

MEXICO — closed to such imports*

BRAZIL — closed to such imports*

ARGENTINA — closed to such imports*

*due to shortage of exchange and growing nationalism

CANADA — closed (by reason of duties)

NEAR EAST — some market, but complicated due to scarcity of exchange and unstable political conditions

FAR EAST — limited market due to under developed economy even if dollar exchange available

AUSTRALIA — closed to U.S. imports by virtue of lack of dollars and protective tariffs

NEW ZEALAND — same situation as Australia

UNION OF SOUTH AFRICA — excellent market but dollar exchange extremely difficult to obtain

AUTHOR STRESSES NEED FOR BETTER UNDERSTANDING OF MOTIVATION IN FOREIGN MARKETS, NEED FOR

by Richard F. Morris • SALES MANAGER, INTERNATIONAL DIVISION, WHIRLPOOL-SEEGER CORP.



What is the potential for home laundry sales abroad and where can these products be sold? How can the American manufacturer obtain his share of the foreign market?

Why is there a difference between domestic and foreign consumer demands? The correct answers to these questions will provide the key to making the world our market for home laundry appliances.

Let's take a look where we can and cannot sell American manufactured

laundry appliances and why. Only those countries that earn dollars by exporting sufficient quantities of raw materials to the United States (or other dollar areas) can afford to buy our products in return. A great many of the free nations of the world do not have a favorable trade balance with the United States, and such products as washers or dryers are classed as luxuries for import in these countries.

There are, however, a few countries that do have favorable trade balances such as Venezuela, Cuba and Puerto

Rico (a U.S. possession) and these countries do offer a good potential market on a direct import basis.

Other South American markets

There are a few other Latin American countries such as Peru, Costa Rica, Guatemala and Panama where laundry equipment can be freely imported in limited quantities, but the great nations of Mexico, Brazil and Argentina are closed to such imports due to a shortage of exchange and a growing nationalism

which is motivated by a desire for self sufficiency. Canada is closed for direct imports for all practical purposes by reason of duties to protect their own appliance industry. In Europe, there are many appliance manufacturers who have designed home laundry products to meet European standards, i.e., small size and built-in hot water heaters.

The countries in Europe where these small machines are manufactured have protective tariffs which prohibit free importation of the U.S. manufactured product. In the Near East, there is some market for the U.S. product, but this is complicated by a scarcity of exchange and unstable political conditions that exist.

In the great African continent an excellent market for home laundry equipment exists in the Union of South Africa, where dollar exchange for American manufactured products is extremely difficult to obtain. The free nations of the Far East are under developed economically and offer limited markets for our products even if exchange were available. Australia and New Zealand are closed to U.S. imports by virtue of a lack of dollars and their own industries which have protective tariffs.

Opportunities in Latin America

The best potential markets for laundry equipment are in our own back yard. The free dollar Latin American countries accounted for approximately 75% of all brands of U.S. home laundry equipment exported abroad in 1955.

operating instructions in a language that they can understand.

In those areas of the world closed to direct imports, we must either license or manufacture if we wish a share of those markets. Licensing competent foreign manufacturers to produce home laundry appliances with our technical assistance is for many firms the most logical way to obtain business that would otherwise be denied them and provides a sound way to promote the quality and standards of American laundry appliances abroad. Manufacturing investments are considered by some firms in those politically stable areas where restrictions on dollar remittances or expropriations seem unlikely.

The "target" is not the same

All our domestic product design is aimed at the ultimate customer who is often referred to as the "American housewife". In selling abroad, many of us are inclined to forget that this customer, the American housewife, is both unknown and an ill-convinced sales idea. The customer, may in some instances, be a housewife in our own jargon, but the average family in Latin America who can afford a washer also has a maid, and it is rare that the lady of the house, as she is more properly called, has ever set foot in the kitchen. As manufacturers we must, therefore, design a product which is simple and easy to operate.

The motivation to buy our home laundry equipment in the United States is

based on labor saving benefits, pride of ownership and efficiency benefits (covered by product features). We only have some ideas about the motivations to buy our laundry equipment in foreign markets but are not absolutely sure as to the real reasons why people buy such products, and a thorough research job appears to be out of the question, considering the diversity of markets. We know one thing for sure, and that is that the labor saving benefits which are the dominant feature in the American product are less important in the foreign markets, and such benefits as efficiency and sanitary means of washing are often much more important to the ultimate consumer.

We must not make the mistake of trying to remold the world in our image, but must lend our foreign customers, whether they be distributors or licensees, our technical ability to sell or produce the best and most efficient home laundry products manufactured. We must also assist them with our knowledge of mass merchandising adapted to their market needs. By meeting these challenges, we can make the world our market.



**".. we must not make the mistake
of attempting to mold
the world in our own image..."**

Richard F. Morris

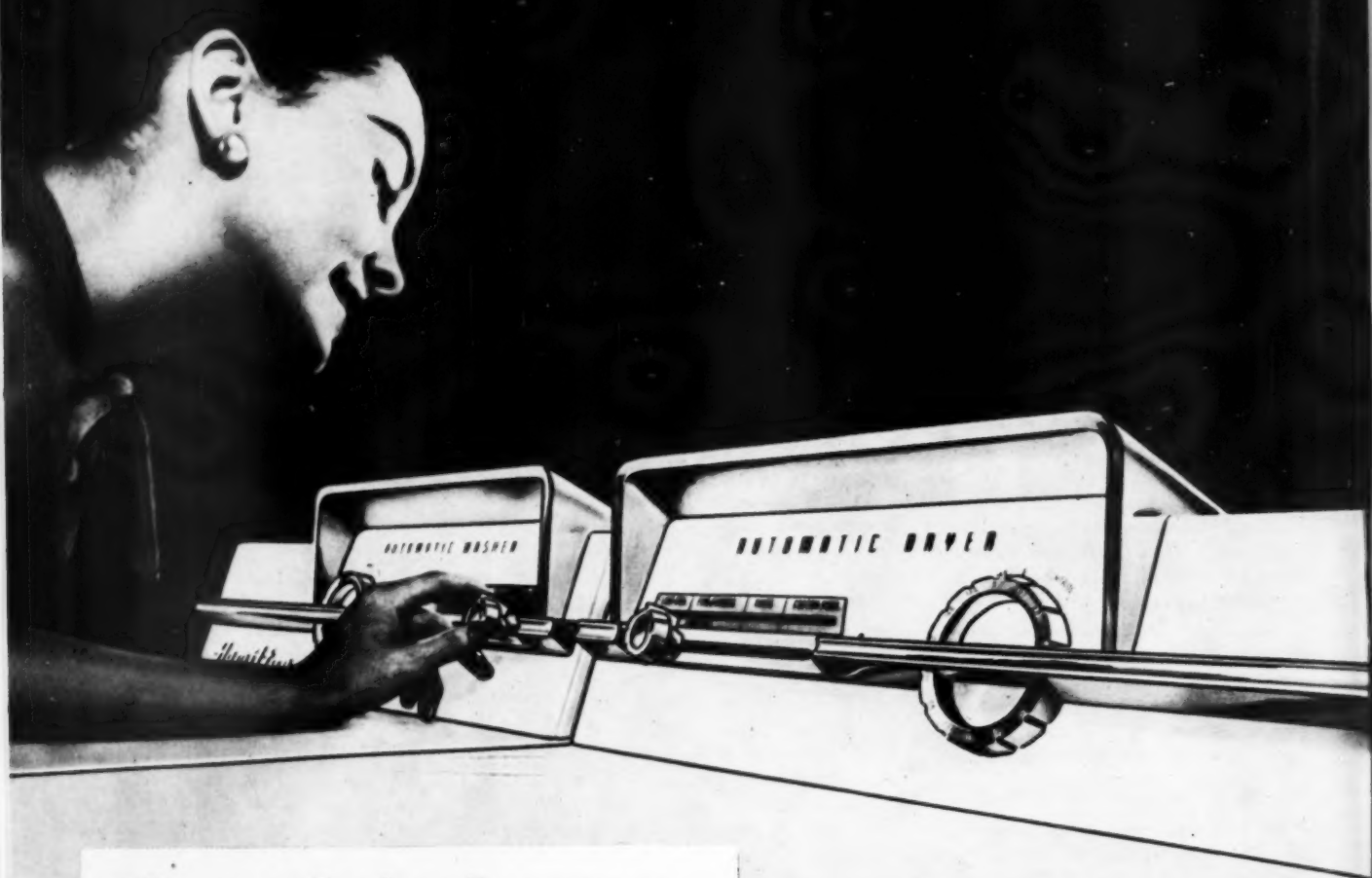
REED LITERATURE AND INSTRUCTION BOOKS IN NATIVE TONGUES

Trade balances with other parts of the world do not appear likely to ease up in the near future, and there are some indications that certain markets will become more restricted.

In some of the free dollar areas, e.g., Venezuela, Cuba, Puerto Rico and Peru, American manufacturers are competing less against each other than they are with the principle of mechanical washing as a necessity rather than a luxury. In these areas there is much to be done educationally, and a joint industry effort can achieve the desired effect of more sales for all concerned.

Bridge language problem

One of the steps necessary to sell customers on our products is sales literature and operating instructions in the language of the country. The customer has the right to expect literature and



Planned obsolescence

by Brooks Stevens • FELLOW, SOCIETY OF INDUSTRIAL DESIGNERS

"IS IT RIGHT TO SELL NEW APPLIANCES TO RECEPTIVE CONSUMERS ON THE BASIS OF COLOR AND TRIM ALONE?" "I EMPHASIZE THAT THE APPLIANCES OF A HOME, IN ALL OUR PRODUCTS, PLAYS A NECESSARY PART IN THE PRODUCTIVE HEALTHY ECONOMY OF THE COUNTRY."



TODAY the engineer and the industrial designer are recognized friends and work together smoothly in the development of products for the American consumer.

Therefore, I would like to review the historical background of the relationship of art to industry and its place and importance in the manufacturing economy in these great United States.

The industrial designer is not new in the world of the machine and the field of merchandising products or services to the consumer. Esthetics, which consist of the pleasing formula of proportion, line, form and color, are as old as civilized man. The builder and the architect in ancient times built not only

to house and to shelter but with a definite and unconscious desire to please the eye and create admiration and pride. The earliest peoples decorated themselves to impress others and to record, visually, strata of achievement.

The "beginning" of beauty

As the machine age began to make itself an ever-increasing factor in the lives of people, the artisan and the engineer and the draftsman of the period paused in the last moments of planning to unconsciously, or instinctively, attempt to produce a better line or curve of applique for appearance sake. These instinctive efforts, together with a natural receptiveness on the part of the people, began a definite and early basis for an assist to economic progress.

Design and esthetics have always been



Brooks Stevens
Brooks Stevens Associates, Milwaukee

used to sell and to educate, even though we think today of the profession of industrial design as a relatively new movement. I believe that it is only *new* in being recognized as a profession and the title being applied, as well as its exploitation in public relations and publicity of a plus effort on the part of the manufacturer in the collaborative approach to product development.

Lo, the locomotive!

In the earliest days of the "*Iron Horse*", the builder recognized that fear existed in the minds of the people, and the railroad train had to be treated and merchandised in a manner that would expel the fears of potential passengers. The wooden coaches of the day carried stained glass windows and elaborate and artistic oil paintings on the sides of the cars depicting the beauties of the landscape through which they traveled.

The locomotives, designed and built by engineers, were decorated and contoured to be a thing of esthetic beauty in the style of the day. Large amounts of brass, gold striping, Gothic-shaped windows in the cab and many other purely esthetic measures were taken to soften the noise, the billowing smoke and the personality of this new monster of the rails.

These were the stylists of those days, educating and selling the public on a new mode of travel through the subtlety and instinctiveness of esthetics. As the machine age invaded the home, the

ance became the order of the day. The economic depression period became the levelizer of many things—stocks, bonds, prices—and pyramiding panic among people. Industry, the backbone of economic stability, was forced into retrenchment and product evaluation.

At this point industrial design and the sleeping profession emerged, and "Operation Bootstrap" began. The recognized pioneers set forth, as individuals or with small staffs, to revitalize selling by heavy emphasis on eye-appeal and "buy-appeal". Norman Bel Geddes advised a kitchen range manufacturer to put the oven below and to enclose the entire unit with a sheet metal skirt reaching to the floor. Gone were the Chippendale legs and the under stove area which was difficult to clean.

Prove design value in market place

This manufacturer went to the market for those few buyers with dollars in this depression period, attracting them to a product over and above the competitive one in appearance. This obvious march toward improved functional design and esthetic pride-of-ownership forced the competitor to compete with new design. The race was on.

The refrigerator became the second exponent of style, and the Sears Cold-spot esthetic crusade will go down in selling history as a milestone of "Planned Obsolescence".

The washing machine, the toaster and other appliances began, through this

competitive race for esthetic supremacy, to improve the economic position of manufacturers in general.

I, personally, entered this profession in 1933, having been trained in architecture at Cornell University. Building was at a low low, and my personal fascination for the motor car and all forms of transportation, as well as any product of multiple manufacture, led me to put forth a shingle in the name of the newly organized profession: industrial design.

Design as a sales tool

Early assignments in the field of electrical motor control, wherein no function was changed, emerged as a visual redress of the product and showed tremendous advances in sales. In this instance, I do not wish to claim that the consumer reacted directly to this restyled product. However, if we provided a new enthusiasm for the sales force, new avenues of selling for the advertising department, this alone may have been "Operation Bootstrap"—for the manufacturer.

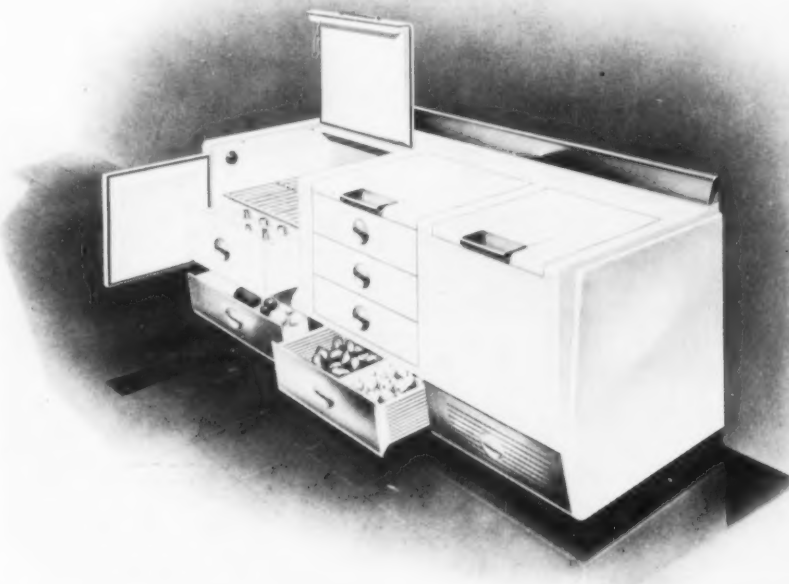
One of my first assignments in the appliance field was the conventional washing machine and wringer assembly. We were in an era of "streamlining"—an ultimately hackneyed and misapplied term—and the public was being educated to the simplicity of line and form and the aerodynamic shape of aircraft and the early attempts in styling the automobile.

"I AMPHATICALLY 'YES'. PLANNED OBSCOLENCE
ECONOMY THIS DEMOCRACY AND IN ITS GROWTH."

house-wife had to be appealed to. The sewing machine was a wonderful functional labor aid, and the machine took on, with the aid of the draftsman and the stylist of the day, curvaceous contours in the cast-iron leg supports, with gilded rosettes or filagree that supported the furniture-like wood enclosure which housed the machine of the home.

These all were efforts to strike down resistance and build acceptance to an obviously great functional addition to the everyday life of Mrs. America.

As the automobile took to the road in ever increasing numbers the function became accepted, and competition in the vast new industry became rampant. By the boom period of 1928-9 the economical aspects of engine design, mobility and durability were becoming accepted, and body styling and prestige appear-

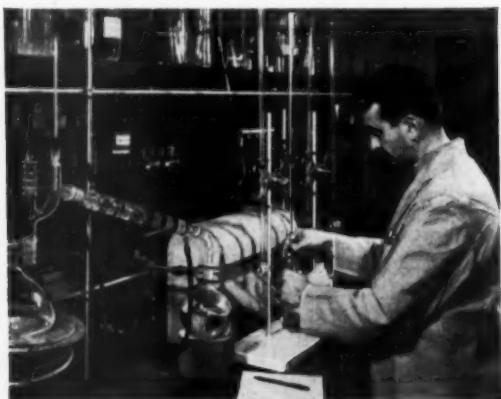


BUILT-IN FUTURISTIC rendering for drawer type freezer-refrigerator which offers ease in storage operation and has sectionalized temperatures.

Pittsburgh offers you the skill and experience of 415 Finishes Technologists



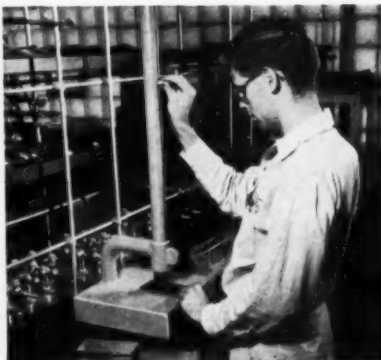
● Pittsburgh Plate Glass Company's new Paint Research Center at Springdale, Pa., contains the most modern laboratories devoted exclusively to the creation and experimental production of new finishes.



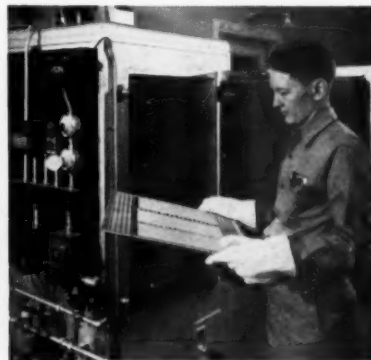
● A necessary part of research and development is the creation of new chemical vehicles to improve industrial finishes for many types of products.



● Resistance to corrosion from moisture, humidity, salt spray and detergents is checked by a series of immersion baths.



● Flexibility, adhesion and toughness are measured by severe impact tests under extremes of temperature and humidity.



● Test panels are baked in gas-fired ovens to reproduce conditions found in various types of industrial applications.

You can get superior finishes for your products and more efficient ways to apply them . . . without increasing your payroll.

TO HELP YOU get consistently better finishes for your products, Pittsburgh now offers you the most modern facilities for fundamental and applied research in the paint industry.

● In its new Paint Research Center at Springdale, Pa., and in the development departments of its 11 paint plants, Pittsburgh maintains a staff of 415 highly trained chemists, engineers and technicians. The creative work of this group is supported in a practical way by an experienced field sales and service staff.

● Objectives of this group are: 1) to make better finishes for *today's* products from existing materials; 2) develop new finishes for *tomorrow's* goods from new chemical compositions and; 3) devise more efficient ways to *apply* these finishes.

● Bring your finishing problems to us. You can have the benefit of our facilities and the creative ability of our technologists to help you develop superior coatings without adding to your payroll. Pittsburgh Plate Glass Company, Industrial Finishes Division, 1 Gateway Center, Pittsburgh, Pa.

PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

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PLANNED OBSOLESCENCE CONTINUED

It appears baroque at this time, but I applied the then vogueish motif of tear-dropped legs to the tub and tear-dropped lever controls to the wringer. It was then a streamlined washing machine, and the sales went up, and the cash register rang constructively. I decided at that point that an individual crusade for purism of art in the industrial product would be a thankless one as compared to the joyful ring of the cash register for my client.

The appliance design period that followed for all designers was naturally one of furtive experiment and groping for a sound basis of approach. As in any development, there had to be growing pains, and we lived through the embryonic period of decorative adornments, in our march to progress.

Stepping stones to prosperity

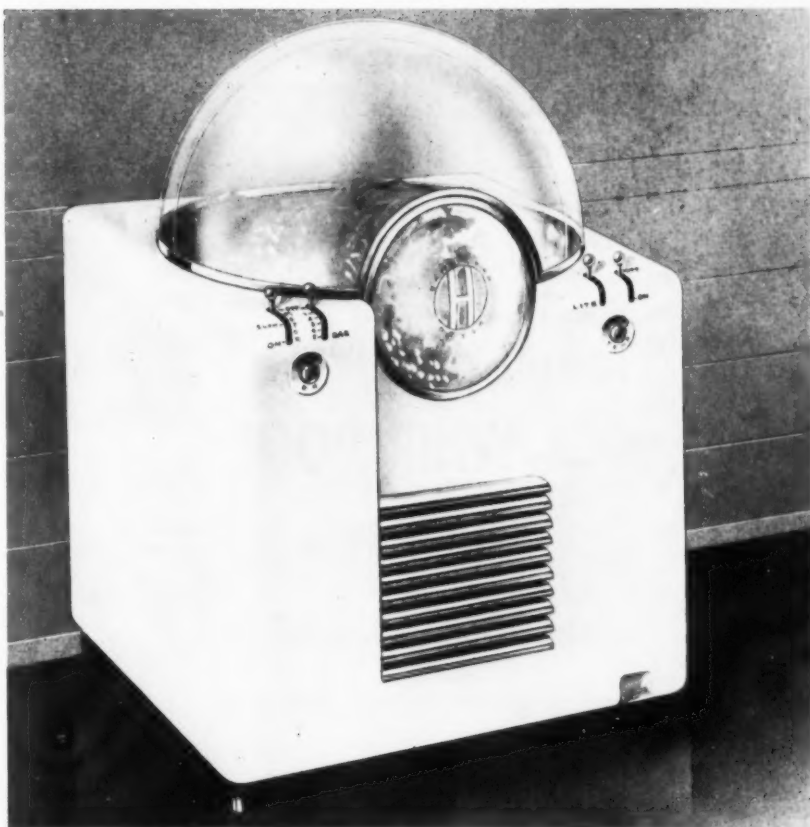
As bad as these treatments now appear, let's not forget that they were economic stepping stones to a better prosperity. As the industrial designer, the manufacturer and the engineer got to know one another, a definite dignifying of the styling approach to appliance design became apparent. We were on the brink of new materials, new tooling approaches and new horizons of sales volume that would provide dollars for experiment, exploitation and better products for the woman's world.

Tragedy in another form then struck the world . . . World War II. Industry, as well as the designer, had to turn toward defense and self-preservation. This period of accelerated need, despite its cost in billions, provided techniques, materials and procedures for a better postwar product approach. This period was not without its overly enthusiastic influences. In order to stimulate saving and the purchase of War Bonds and to perpetuate manufacturers' identities through institutional advertising, blue sky prophecy designs were rampant.

Blue sky imagineering

The magic button-pushing, electronic, all-plastic existence of the postwar period was highly advertised and pictured to the public. Round refrigerators with transparent doors, revolving shelves, ice-cube ejectors, helicopter-type vacuum cleaners which soared from room to room without effort, were all being rendered through the magic medium of the airbrush to the consumer of the postwar period.

The industrial design profession, unfortunately, received much of the credit for these tear-dropped, all-plastic auto-



PLASTIC DOMED AUTOMATIC washer-dryer design is typical of the extreme post war prophecies for aircraft controls, etc., but design features have possibilities.



1938 STEVENS DESIGNED Barton washer took on the aerodynamic contoured legs and fluted skirt, softening the angular modernistic motif of previous model. It appears baroque now, says author, but it made the cash register ring then.

EPON RESIN does it!

Tough primer on RCA WHIRLPOOL Washers

withstands rugged
washday punishment



RCA WHIRLPOOL Washer cabinets on storage conveyors. Finish system includes an Epon resin undercoat, formulated by Grand Rapids Varnish Corporation.



Epon resin-based finish plus careful inspection eliminate customer complaints.

HERE'S HOW...

SOAPS AND MODERN high-strength detergents are persistent enemies of ordinary paint. Because of severe corrosive conditions in some geographical areas, home laundry appliances often show rust stains in just a few weeks of service.

Whirlpool-Seeger Corporation, St. Joseph, Michigan, has found that a primer based on Epon resin gives an outstandingly superior protective finish to its washers, driers, and other home laundry equipment. To maintain the highest standards for coatings, Whirlpool-Seeger set up a system of continuous quality-control testing in their finishing section.

Epon resin-based primers, now standard on RCA WHIRLPOOL Washers, are credited with all but eliminating a major source of field complaints about coating failures.

. . .

If you have a product finishing or paint maintenance problem, you, too, may find that Epon resin-based coatings will do the job better. They have excellent adhesion, high resistance to impact and abrasion, outstanding resistance to moisture, heat, and corrosives. Ask your supplier for Epon resin-based paints and enamels. Write for the full Epon resin coatings story: "Planning to Paint a Pyramid?"

Epon resins are the epoxy polymers made exclusively by Shell Chemical Corp.



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OBSOLESCENCE CONTINUED

mobiles, et cetera. But we find ourselves today, just a decade after the conflict, looking at gleaming new refrigerators — not round, but with revolving shelves. We have also a plastic car — fibreglass, to be exact. Therefore, the inspirational value of looking ahead provokes engineering exploitation and results in a better product for better living.

"Planned Obsolescence" sounds like a charlatan's stratagem to dupe the consumer into the purchase of a new motor car at the 15,000 mile point, or a new automatic washer, when the former one would last for ten years, but we must not forget this is a free country, and the consumer can buy on the easiest of terms the newest product that gives him pleasure. The annual model of the automobile with a new set of dentures or a new tail fin becomes the ego-satisfying badge of achievement to the Joneses in their community — and who doesn't want to keep up with the Joneses?

The new automatic washer has a lighted instrument panel and a cycling control, and the clothes dryer has a light in its instrument panel which reminds the busy mother that it is still whirling her unmentionables about.

The life blood of the traded-in automobile, automatic ironer, or TV passes on to the good American consumer in a lesser income bracket, who could otherwise not afford this luxury at its original retail price. Thus, "Planned Obsolescence" in the home-appliance plays its necessary part in the productive healthy economy of this democracy, and employment remains at an all time high.

Selling color and trim

Is it right to sell new appliances to receptive consumers on the basis of color and trim alone? If this subtle esthetic adjunct to a good functional design pleases the missus, I say emphatically, "Yes", because it may only mean a twenty-five cent increase per month in that budgeted payment which began many years ago and may always be there.

With an eye to the future — and a wary one — we will be forced to call upon the ingenuity of the engineer and the industrial designer to perpetuate product design and styling and "Planned Obsolescence" in the forthcoming "built-in" world. The ranch-type home, the utility room, the kitchen of tomorrow,

the built-in washer-dryer, the wall-hanging refrigerator, and the centrally located cooking center appear at first to be ultimates in modern living.

However, in 1902, Ransom E. Olds, designer and builder of the fabulous Oldsmobile car, formed a new company and produced the Reo car, his initials making up the name. He announced it to the American public and to the world as the greatest accomplishment in automotive engineering and design that could ever be attained. He called it "My Farewell Car."

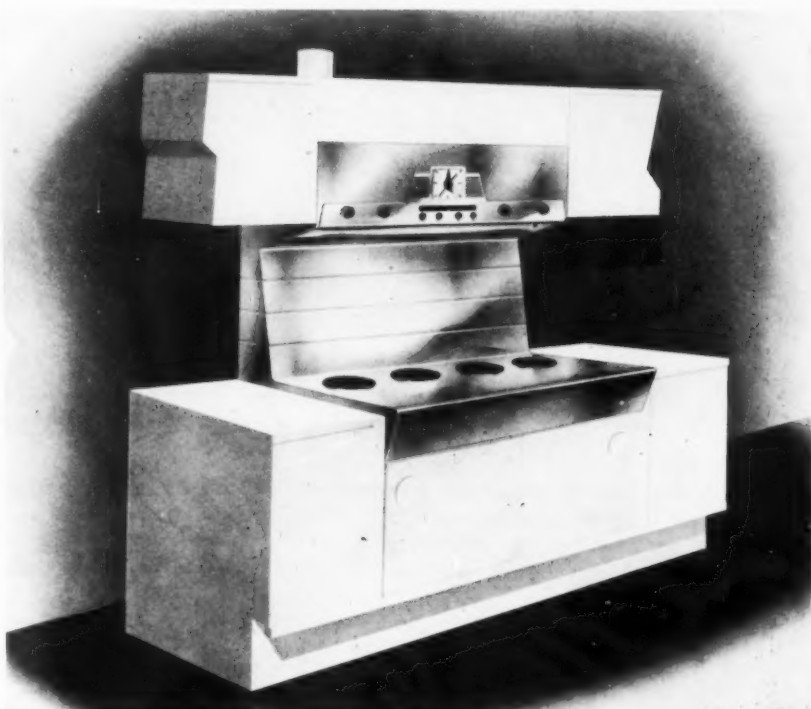
In summary, it is entirely possible

matic dishwashing equipment, flanked on either side with utility surfaces for flower cutting and arranging, etc. A large picture window above the sink would look out on the pleasantness of the landscaped yard area. In the center of this "U" shaped functional perimeter would be the island cooking unit of the future for all functions pertaining to cooking, frying and baking.

Step toward better living

Thus, the home laundry unit of the future, not unlike the console radio and TV and Hi-Fi set, would find its way

"WE'VE COME A LONG WAY FROM THE WOOD BOX"



IMAGINEERED INFRA-RED range combination for tomorrow's "built-in world" has its points. Note positioning of controls. And, infra-red, incidentally, is here!

that in the contemporary home of tomorrow there will be a pleasantly decorated and livable room adjacent to the kitchen, or part of the functional living area, to include along one wall a single table level cabinet, with the following elements — the automatic washer function, the automatic clothes dryer function and the automatic ironer function. Opposite, in a similar and matching table top complete cabinet would be the refrigerator-freezer drawer type unit.

At the far end of this room and at a connecting height, forming a "U" shape condition, would be the sinks and auto-

into an integrated scheme of things wherein the refrigerator manufacturer, the sink and dishwasher manufacturer and the range manufacturer would attune their efforts to a set of standards which would make the built-in utility room of tomorrow a thing of functional beauty.

The *Planned Obsolescence* factor of tomorrow's built-in living lies in the further exploration of new materials, textures, controls, instrumentation, and shall we say perhaps the "Univac" way of life which is beginning to be felt in industry and government even today.

Ironrite's automatic ironer rental plan



a plan to revitalize that ironer market and take advantage of the vast untapped potential is explained in this tested sales program

by R. M. Gottlieb • VICE PRESIDENT IN CHARGE OF SALES, IRONRITE INC., MT. CLEMENS, MICHIGAN



RENTING of major appliances to users is not new. We know of instances considerably over twenty years ago where the rental idea was successfully used. However, we know of no such plan which has ever before had anything like the nation-wide scope of Ironrite's Rental Plan. Starting in the west about two years ago on a modest scale, the plan is now in use by Ironrite distributors and dealers in all but a few United States areas. These areas, too, are now, or will soon be, operating with the rental plan.

The sale of an automatic ironer is a creative sale. Ironrite owners almost invariably love their ironers. Many owners tell us their ironer is the last appliance they would give up. We continually receive unsolicited testimonial letters from users who have had their machines for from three months to thirty years, telling us how much they

like their machines and how much work they have been saved.

An automatic ironer saves a tremendous amount of time and effort for the homemaker. Thus, she is able to do more other things for and with her family. But homemakers who do not know what an automatic ironer is and how it can banish the drudgery of hand ironing are not interested until they are shown. This is in spite of the fact that surveys show hand ironing is the homemaker's most disliked household chore.

Users do 97.6% of ironing on ironer

Homemakers who have not used an automatic ironer erroneously assume that it is difficult to use, and a great many of them further assume they can be used for little beyond flat work. A survey we recently made among owners proved overwhelmingly that both of these assumptions are entirely wrong. The survey showed that only .6 of 1% of purchasers found them difficult to

use, and users do 97.6% of their ironing on them. Over half of the owners never use a hand iron. Nevertheless,



R. M. Gottlieb
"the mechanics are relatively simple"

the incorrect assumptions persist among the uninitiated.

Obviously the way to make retail sales is to get homemakers to try an ironer in their own homes on their own laundry. It is there they find how easy it is to use. There, they find they can do their entire ironing in one-third to one-half the time they would use for hand ironing. Through rental they learn these things. Then they want to buy, and do buy.

Advantages of home rental

Psychologically, the rental plan is better than a free home trial. In paying the weekly rental (about \$2.00) a homemaker does not feel obligated as she does on a free home trial. She feels she is paying for the use of the machine and, therefore, really uses it right from the start to get her money's worth. Through use she finds its true value. Converting a rental to a sale is low pressure, definitely not high pressure selling, because the homemaker and her family have several weeks to think about it and in most cases the ironer sells itself.

Conditions in the conventional appliance retail operations are not conducive to creative sales. Competition in conventional appliance retail operations is rough and profit margins are small. Dealers are trying to stay in the black by meeting low margin prices and hoping that big volume will be the answer to their staying in business. Manufacturers are vying with one another in cash and merchandise prizes, trips and all sorts of incentives to try to induce dealers and their retail salesmen to concentrate on their particular lines. Because of very low commission rates, few retail appliance salesmen today feel they can spare the time to really create the desire for a product and then make the sale. Consequently, the sale of automatic ironers would suffer in the conventional appliance dealer's store.

Mechanics of Ironrite plan

The mechanics of the *Ironrite Rental Plan* at the distributor and dealer level are relatively simple. Distributors either handle nothing but Ironrite or have an amply manned department in a multi-line distributorship where individuals representing Ironrite spend their full time on our product. Thus, activity is assured. In turn, these distributors sell to district retail dealers who sell nothing but Ironrite, or appliance dealers who have employees who devote full time to Ironrite rental and sales.

A full dealer profit margin on our product, which is one of the highest in the major appliance field, has a great appeal to appliance dealers. Many dealers have been recruited from other occupations because of the appeal of big rewards for reasonable effort. Our factory personnel trains distributor people in the rental plan procedure and operation. These trained distributors then train the dealer personnel.

The backbone of the rental operation is direct salesmen. Selling in the home is what produces rentals that lead to sales in volume. Dealers supplement the home selling by using newspaper, radio, TV and other advertising media.

Careful training of retail salesmen

All retail salesmen are fully trained. First, they hand iron completely a week's wash for a typical family of four. This usually takes about eight hours and gives the trainees a full realization of the drudgery of hand ironing. Then they learn to use the Ironrite ironer capably. The next step is to train them on sales techniques, such as how to get into homes and how to close rentals and sales. Then they are sent out into the field under the direction of a supervisor.

When a rental is placed, about five weeks' rental fee, which amounts to about \$10.00, is collected in advance. Promptly after delivery of the ironer, the renter is given complete instruction in her home on its use by the dealer's home economist, who has been thoroughly trained by the distributor's home economist.

About three weeks later the home economist checks back with the customer to be sure she knows how to use

her ironer for even the most complicated of items.

Shortly thereafter the salesman then drops in on the customer and attempts to convert the rental to a sale. A national finance plan enables homemakers to buy the machine at only a few cents more a week than the rental fee. A very high percentage of renters buy the machine after three to four weeks of rental. Most returns of ironers to dealers are due to financial reasons, and many of these people have been known to buy at a later date when they are in a better position to buy.

The *Ironrite Rental Plan* has already proved its long range stability in the areas first established by continued sharp increases in volume by dealers. Distributors like the straight forward, no-gimmick operation with volume sales to district dealers, as well as full distributor profit.

Plan has "built-in" dealer appeal

District dealers like the opportunity to sell in an area with ample elbow room, plenty of prospects, practically no trade-ins and a big profit opportunity. Retail salesmen are fascinated by the opportunity to make real good money and grow with the expanding retail organization.

Both dealers and salesmen find a great deal of self satisfaction in knowing they are again able to create a desire for a product — prove its worth — and complete the sale — without the necessity of discounting.

Homemakers obviously like the rental plan too, because they are renting and buying in greater and greater numbers. That, plus a wonderful product, completes the circle and makes it go.



Mrs. Home Laundry Queen for 1957

Easy's Entry — Patricia Hughes of Buffalo, N. Y.



Finish is proud to announce that Easy's entry in the Mrs. Home Laundry Queen Contest — open to all members of the home laundry appliance manufacturing industry — is the winner in the '57 competition. The Sherwin Greenberg photo on this page presents the Mrs. Home Laundry Queen for '57—Patricia Hughes of Buffalo, N. Y., 22-year-old wife of an engineering student and mother of two children.

Only dissenter to the unanimous choice was "constant reader" (See inset at left) who pointed out that she could not understand this excitement over "older" women when it was "her age group" that is the true supporter of the home laundry industry.

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Only PERMAWICK can make all these outstanding benefits possible.





NORGE has introduced a dispenser wheel. Here mother and daughter pour detergent and rinse water conditioner simultaneously into the automatic washer. Centrifugal force holds conditioner until automatically dispensed during rinse.

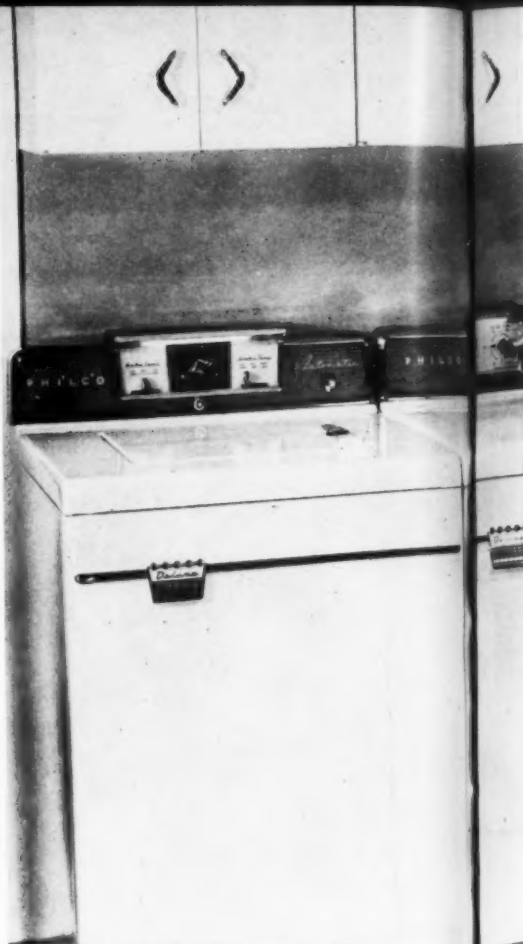
THE NEW LOOKS

pictures can only indicate the quality and the improvements that have been built into the products shown on these pages

Exclusive
feature
finish

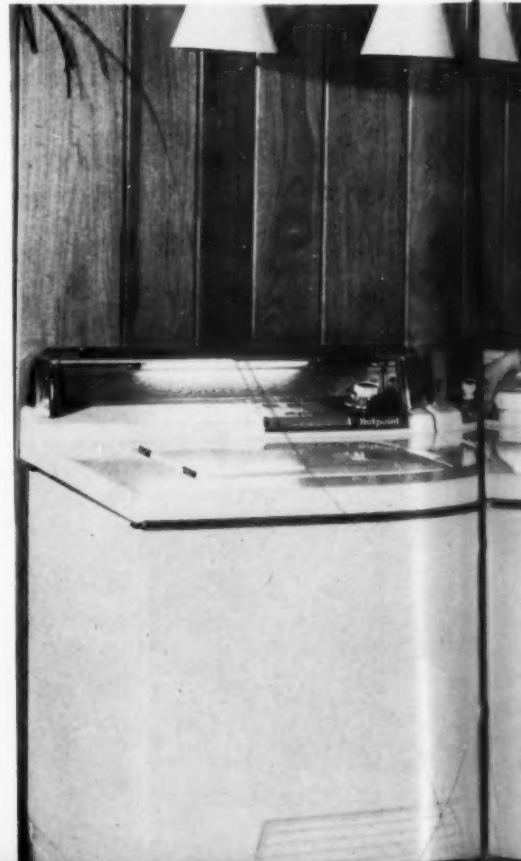
How to turn the problems of laundry into laundry pleasures is well illustrated on the following pages where are shown the latest in models released by manufacturers. Engineering features, for each model, are well worthy of a separate study, although space will not permit. What is interesting is noting the wide spread of color that is being offered as well as the trend toward providing a full range of designs for built-in installation. After a serious study of each product shown on these six pages of photo display, the editors suggest turning back to Brooks Stevens article, "Planned Obsolescence", and give it a second careful comparison study. See what we mean!

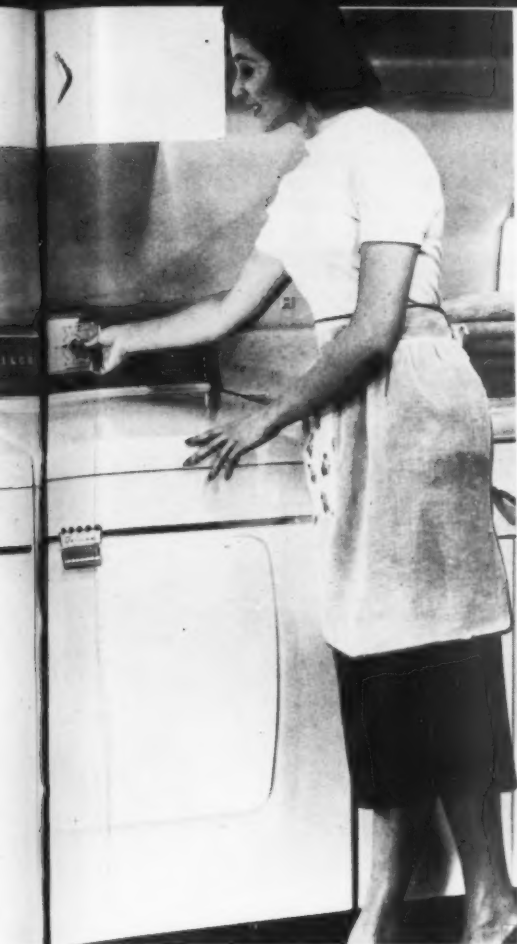
HL-22



PHILCO'S deluxe automatic washer and electric dryer, electric and four gas clothes dryers and seven washers are equipped for natural gas, two for bottleomatic

HOTPOINT'S all porcelain units are matched in appearance, gives user greatest flexibility in history. The dryer controls for high, medium, low or warm dry temperature





Electric dryer, one set of the four automatic washer, three seven washers, introduced in Philco's 1957 line. Two bottle automatic washers have exclusive "ball point balance."

and in appearance. Lighted pushbutton controls, Hotpoint dryer. The dryer has precision timer dial and pushbutton dry feature. Another button permits "flux" tumbling.



RHEEM-WEDGEWOOD DRYER air intake is filtered through this multiple layer of fine metal mesh, which is easily cleaned by holding under a laundry faucet. Twin drying systems, draw-in, warm, and circulate. Unit has "gentle dry" feature.

SPEED QUEEN washer features exclusive bowl shaped stainless steel tub and exclusive multi-screen aerator whereby soap dispersion is speeded up and suds remain in suspension instead of rising to the top of washer during cycle.





IRONRITE has built in beauty in this model which can fit just as well into the drawing room as a class A Hi-Fi set. For a report on how they are planning to put new steam into the dryer market see the special report on Ironrite's ironer rental plan, Page 18-19.

GENERAL ELECTRIC newly designed and engineered "filter-flo" automatic washer and matching clothes dryer with a new high-speed drying system have been announced. "Filter-flo" automatic washer, Model WA-850P, has choice of 2 wash, 2 spin speeds for all fabrics.



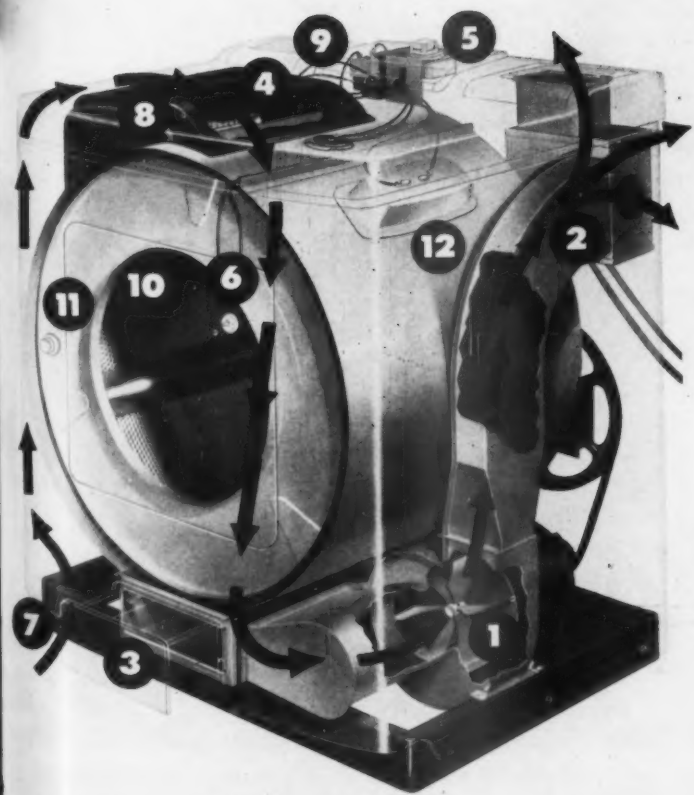
BENDIX will market a full line of combination washer-dryers in their 1957 line. The duomatic models, available both in gas and electric, in three colors and white, will feature full-width lighted back panels, lighted control and six water temperatures. Custom dryers will have ultra-violet ozone light and special heat switch.



MONITOR'S portable twin set offers an ideal solution for apartment dwellers. The Aerator washer washes 5 lbs. of clothes in 5 minutes. Dryer handles 6 pounds of clothes in about 90 minutes.

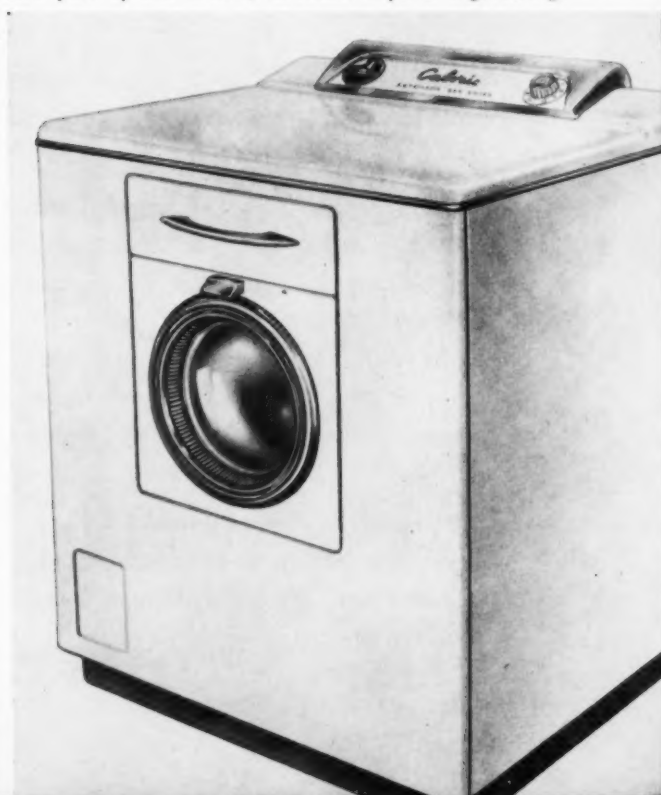


FRIGIDAIRE has highlighted the new blend-in, built-in styling concepts in their 1957 line of automatics. Porcelain finished pair shown here are imperial models with illuminated control towers replacing ordinary back-panels customarily used by designers as place for switches and dials. Washer has a variety of features including new underwater bleach and detergent dispenser. Dryer has "hands free" foot pedal door opener and does not require venting or plumbing.

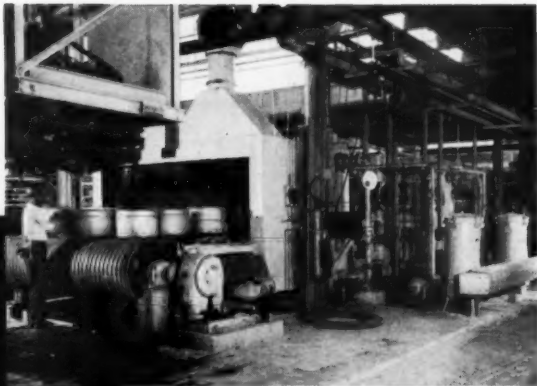


TEMCO has designed a dryer which employs a unique turbine-type blower which they call the "Mistaway," which provides a much greater through-the-clothes air flow. Designed for equal efficiency with all gases, unit is "one dial" controlled.

CALORIC'S Model 100 dryer is featured in the photo below. Not shown but a vital part of the unit is its $1/3$ hp motor and the lifetime burner guarantee. Self cleaning blower blade and a waist high lint screen are also part of the lo-heat, hi-breeze dryer's engineering.



Ingersoll manufactured tubs emerging from spray pickling operation



From Start to Finish...

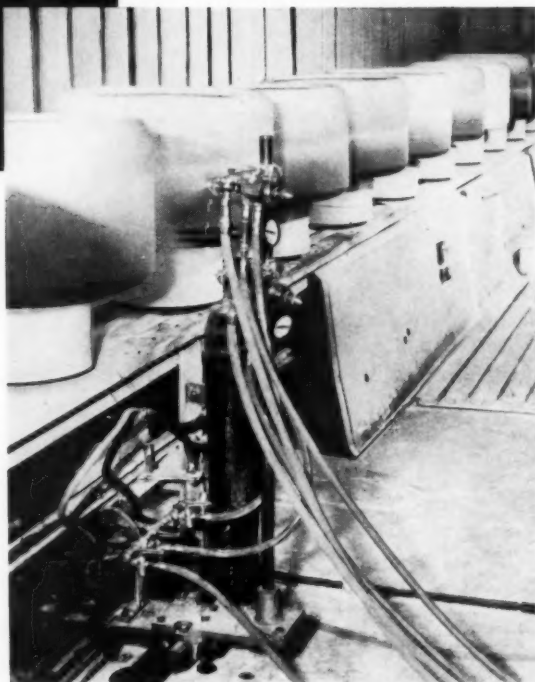
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Solves Your Tub Problems

Designing a washer tub is one thing. Engineering it through to mass production is something else again. It calls for specialized knowledge and experience, specialized skill, and specialized equipment to assure large-scale, high quality production at economical cost.

On every count, Ingersoll sets the pace. Our knowledge and experience covers the whole field of tub design and production. Our engineers can tell you if a design is practical, perhaps show you how a slight change may improve the design, cut costs, or both. Ingersoll specialized equipment assures efficient, high quality, on-schedule production at most economical cost.

From start to finish, Ingersoll "know-how" can provide the answers to any tub problems you may have. See for yourself—consult Ingersoll on your next tub design.



Automatic sprayers assure uniform finish, lower costs.



Ingersoll
PRODUCTS
DIVISION

BORG-WARNER CORPORATION

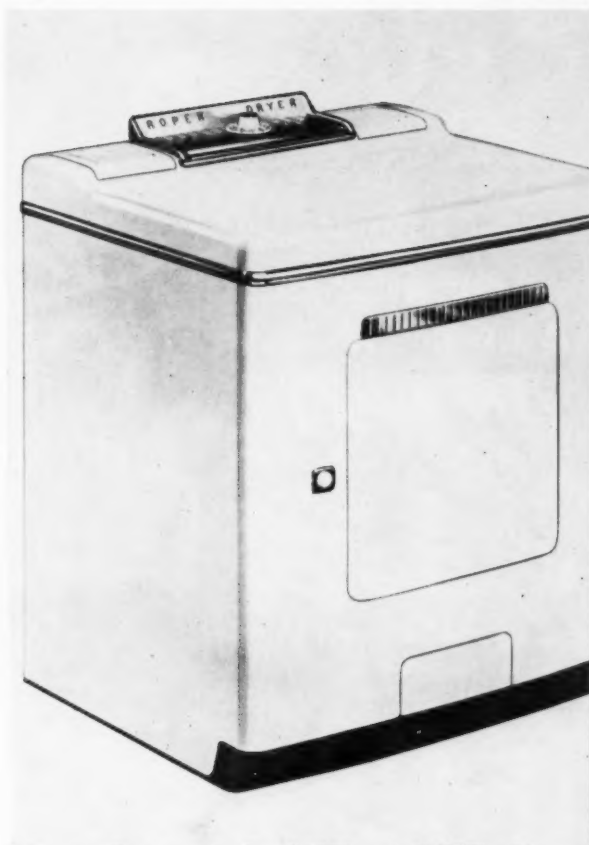
Chicago 43, Illinois



FOWLER'S gas clothes dryer is reported to be only dryer on the market that loads from top. Designed for use with natural, manufactured, or LP gas, air flow system provides maximum through-the-load heat.



WESTINGHOUSE space mates shown here in custom built installation provides the maximum in reach in convenience. Built-in soiled clothing storage bins are below units. Both are available in any of the Westinghouse confection colors, frosting pink, mint aqua, nougat gray, lemon yellow, at extra cost.



ROPER'S "dry-aire" automatic clothes dryers feature single control for both time and temperature. Gas burner lights automatically.

EASY'S new combination automatically chooses minimum water needed for wash, has entirely new principle in tub rotation and positioning.

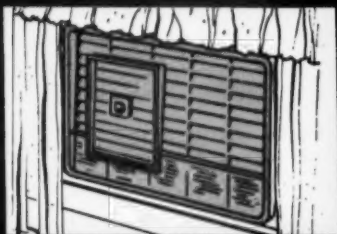


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and easy-to-clean.



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porcelain enamel is heat resist-
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Economical Production
with
one coat applications
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characteristics

High Sales Appeal
with
sparkling whites
—
a wide range of colors
—
acid, alkali, heat and
abrasive resistant

HERE'S WHY—

PEMCO FRITS are adaptable...

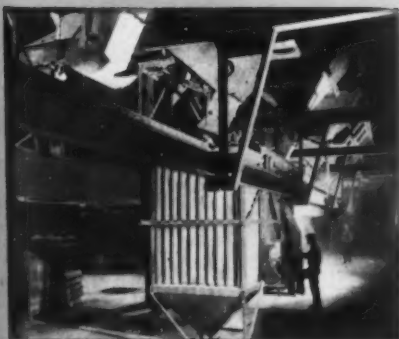
adaptability that lowers reject percentages and simplifies application procedures for you. Covercoats made with Pemco frits give excellent results under fairly wide variations in firing temperatures and furnace loads... wider tolerances in thickness of spray coatings are possible... and they work well in both one coat and in reoperations.

PEMCO FRITS are tailored to fit your product...

whatever your porcelain enamel requirements—high resistance to acid, alkali, heat and abrasion; whatever you manufacture—sinks, ranges, washers or refrigerators, there is a Pemco frit engineered to give you the type of quality finish you want.

Pemco is able to bring all these advantages through controlled processes that assure consistent uniformity.

To secure the many advantages of Pemco products and Pemco service become acquainted with the Pemco representative in your territory.



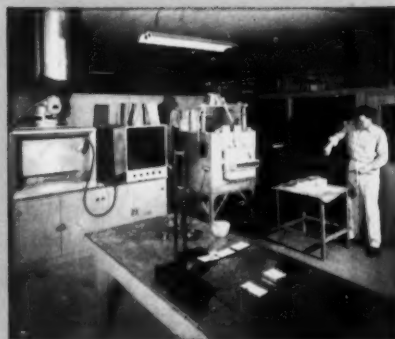
IN FORMULATION

Weighing and measuring processes are automatically controlled, eliminating any contamination or variation in the frit mixture.



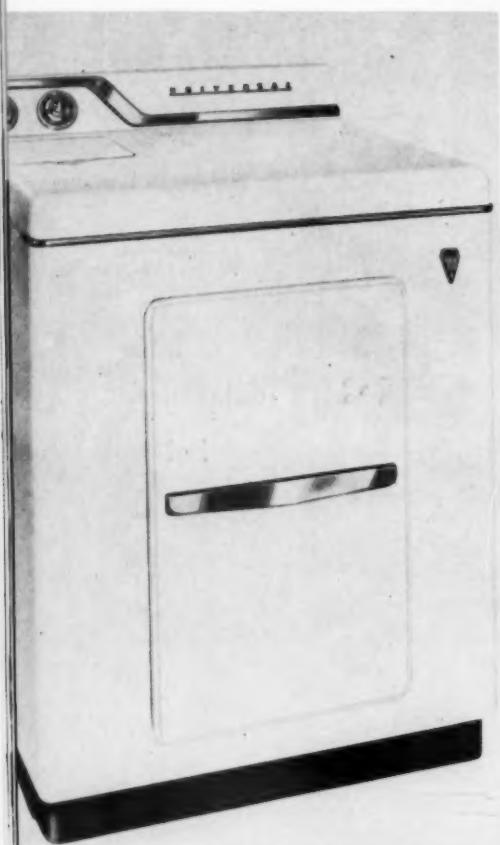
IN SMELTING

Modern automatic controls and visual checking with scientific instruments are employed to assure consistent uniformity.



IN TESTING

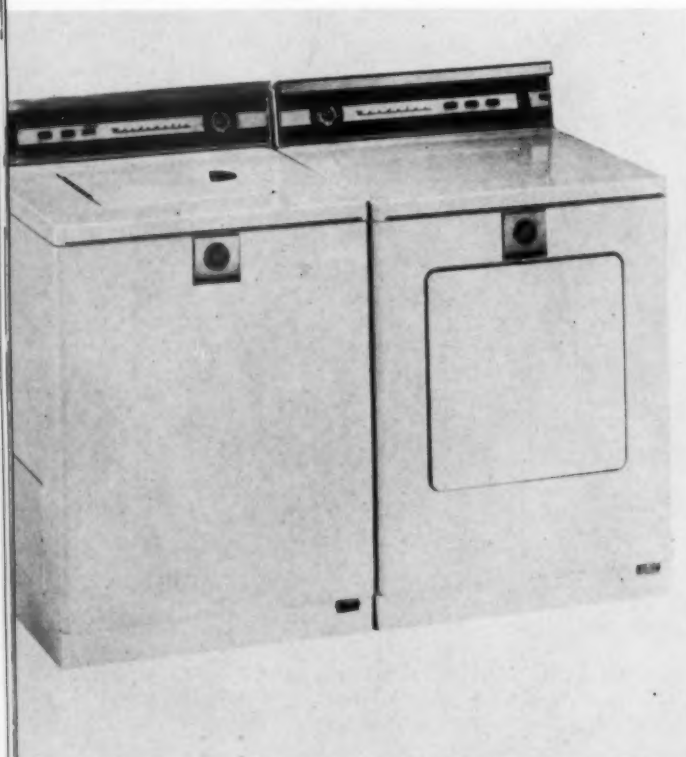
All Pemco frits are tested against customer specifications to give you exactly the results you want.



UNIVERSAL'S automatic gas dryer features simple design with maximum efficiency through planned engineering. Unit has single control set-up.



KELVINATOR'S two cycle washers for '57 feature push button control use of hot or warm water, and two cycles to take care of fine fabric washing. Their automatic electric dryer has hi-volume warm air, snag free cylinder, and safety switch door that shuts off the dryer when door is opened. Both have glass windows.



WARD'S companion pair. Washer features fiberglass tub, exclusive aluminum swirlator with built-in washboard. Gas dryer has "5 ways to dry", porcelain top, ozone lamp.



HAMILTON'S washers and dryers feature "touch and go" controls as well as illuminated control panels of gold and silver, or silver and blue, in decorative design.



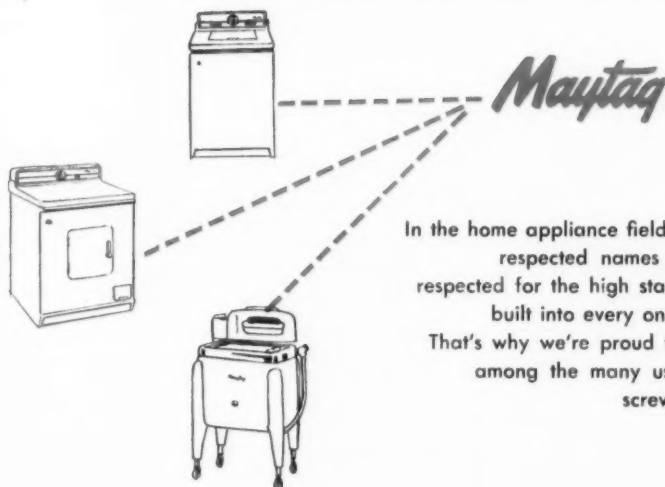
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*Pat. Pend.

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New textiles and the "miracle" fabrics

by Ann Louise Olson

DIRECTOR HOME ECONOMICS DEPARTMENT CROSLY & BENDIX
HOME APPLIANCES DIV. AVCO MANUFACTURING CORPORATION

THE emergence of man made fibers such as Nylon, Orlon, Dacron, Acrilan and many others has done much to advance the trend to "lightweight" living. It has brought in its wake, however, the demand for new features and characteristics in today's automatic washers and dryers.

It is not long since the typical family wash load consisted primarily of white and colored cottons and linens, and some rayons and washable woolens. The major requirements of washers for these items were that they provide a choice of hot and warm wash water, good rinsing, a reasonably safe wash action and a degree of flexibility for "special operations." Excessive heat in dryers proved to be not too serious for these garments.

Washing modern fabrics

The washing of the new modern fabrics, on the other hand, requires a little more specialized knowledge and attention. The popularity of these garments has stemmed not only from their appearance, but also because of their ease of care. While the fibers themselves do have wonderful properties of fast washing and drying, wrinkle resistance and the ability to hold durable pleats, the consumer satisfaction with garments made from these fibers depends on the garment construction, the methods used in washing and the ability of the washer to give good results.

Washing those orlon coats

The various segments of the textile industry have been most co-operative with laundry equipment manufacturers in helping to give consumer satisfaction in washing today's garments. For instance, when white and pastel Orlon coats first appeared on the market, they were tagged "wash by hand and drip to dry." Any one who has hand washed a full length Orlon fleece coat knows what a tremendous task it is because of the bulk and weight of the coat when wet.

At the Bendix Home Laundry Institute we became excited about the pos-

sibility of machine washing these coats. On trying it, we found that while the fabric itself washed and dried beautifully, the overall appearance of the coat suffered. Lining seams puckered and pulled apart, linings were wrinkled because the material used wasn't wrinkle resistant, and shoulder pads failed to hold up.

Cause coat redesigning

With the cooperation of the E. I. DuPont Company who made the fiber, Princeton Knitting Mills who made the fleece, and the manufacturers who made the coats, we made many comprehensive tests. The end result of this joint effort was construction of Orlon coats which were washable in the more gentle washers. These coats now carry machine washable hang tags.

Other types of garments went through the same evolution to insure that their construction was such that they would be machine washable.

While all garments of man made fabrics are by no means completely machine washable today, the indications are that manufacturers are aware of this need and are channeling their efforts in that direction. Many garment

manufacturers now have washers in their laboratories to do their own initial wash testing.

Reason for special adjustments

Even as the construction of the garments became more sturdy, it was evident that they could not be put into all washers and washed with the regular cycle. Some hand manipulation of the washer controls was necessary. Washer manufacturers recognized this and many have added a special fabric cycle to their washers which allows a shorter wash, rinses and spins, all automatically.

About the Author

ANN LOUISE OLSON is Avco's director of home economics for the Crosley and Bendix Home Appliances Division and is responsible for all home economics and home service activities of the Crosley and Bendix Home Appliances Division. A graduate of the University of North Dakota, she served with the Army during World War II in India as a dietitian. Prior to joining Avco, she was technical director of General Mills television programs. She has previously been a member of Kelvinator's home economics group and a home economist with Lever Bros. Before her February, 1956, appointment to her present position, she spent three years as national home service director for Bendix and also as director of the Bendix Home Laundry Institute. In these capacities she directed the activities of more than 2,000 regional distributor and dealer home service girls in one of the automatic home laundry industry's most complete home demonstration programs. She also directed the comprehensive testing programs

for proposed new Bendix laundry equipment and engaged in an extensive testing program with the nation's textile industry. With this background, Ann Olson is admirably suited to discuss the effect of today's newest fabrics on today's home laundry product requirements.



In some cases, two washing speeds have been developed; the slower one to provide the gentle washing action which these modern garments require.

It is best to wash these newer fabrics separately, apart from the regular wash loads. Therefore, manufacturers are adding water saving features to washers which put the amount of water used in proportion to the smaller loads being washed.

As we learn more about the new fibers and their properties, we realize that water temperature plays an important part in the general appearance of the finished garments after washing and drying. Testing by washer manufacturers and textile companies has shown that the greatest contributor to the wrinkling of these fabrics is spinning in the washer while the fabric is hot. As the water temperature is decreased the wrinkling is also decreased. However, cooler water temperatures also decrease the washability. In addition, it was found that warm water is necessary during washing to remove the wear wrinkles from such garments as shirts, blouses and slips.

Washer water temperatures

Therefore, washers must deliver a choice of water temperatures for washing and rinsing different fabrics. The ideal seems to be HOT wash water for white and color fast cottons and linens, MEDIUM for white nylon, Orlon and Dacron (to insure good washability), and WARM wash water for colored man-made fabrics which have a tendency to bleed, and for non-color fast cottons and washable woolens. We also need an optional COLD water rinse to reduce wrinkling of the man-made fabrics and for some cottons with special finishes.

The homemaker who has a dryer need not be quite as concerned about spin wrinkles because the heat of the dryer, combined with tumbling, will remove the spin wrinkles from the thermoplastic fibers if the heat is right. Temperatures ranging from 150° to 170° seem to be the best for wrinkle-free drying. Some dryers have one automatic temperature setting (safe for all fabrics) which eliminates the need for sorting, and others have a choice of temperatures for different fabrics.

With the continued cooperation of the textile mills, weavers, knitters, finishing plants and cutters, and the manufacturers of home laundry equipment, so that each may recognize the needs of the other, the best interests of both industries and the public are being well served.



Ranco designs the control

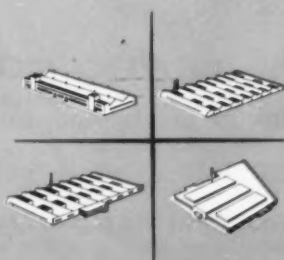
No matter how specialized your application may be, Ranco has the experience and facilities to design a specific control for the specific job it must do.

For example, the Ranco C11 shown above is typical of more than a million Ranco Clothes Dryer Controls already in use, with features that give it easy adaptability to unique dryer designs and exceptional performance in action. Note these C11 features:

- Coordinates with timer motor using a dial or push-button operated temperature cut-out control.
- Available with auxiliary switches to control additional heater circuits.
- Quick-disconnect or screw-type terminals.
- Mounting bracket has multiple holes for flush or side mounting. (Special brackets can be made.)
- Electrical rating—listed and approved—is 25 amperes, 250 volts, a.c. and 125 volt-amperes, pilot duty at 125 volts a.c.
- Bright zinc, Iridite treated exterior finish.

The C11 is only one product of Ranco's qualified engineering and production staffs.

More than 15 controls a minute roll off the production lines at Ranco's three assembly plants, indicative of the overwhelming popularity of Ranco Controls in the refrigeration, air conditioning and appliance fields.



Ranco Inc.

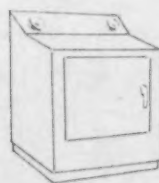
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WASHERS

Question: "Which of these types of finish do you consider best for the **outside** of Clothes Washers?"

Answers: 64.8% voted for Porcelain enamel, 28.3% for the second-choice finish, with 3.7% expressing no opinion.

Question: "Which of these types of finish do you consider best for the **inside** of Clothes Washers?"

Answers: 77.3% voted for Porcelain enamel, 13.5% for the second-choice material, with 3.4% expressing no opinion.

DRYERS

Question: "Which of these types of finish do you consider best for the **outside** of Clothes Dryers?"

Answers: 56.7% voted for Porcelain enamel, 35.1% for the second most popular finish, with 4.1% expressing no opinion.

Question: "Which of these types of finish do you think best for the **inside** of Clothes Dryers?"

Answers: 60.3% voted for Porcelain enamel, 20.8% for the second-choice material, with 5.0% expressing no opinion.

Above figures are from independent surveys made among 6,000 representative appliance dealers. Table below shows how dealers voted on various materials and finishes. Would you like to see a complete report on these surveys? If so, just write us!

HOW DEALERS VOTED ON PRINCIPAL ADVANTAGES OF MATERIALS AND FINISHES

	Material "A"	Material "B"	Finish "C"	Finish "D"	Porcelain Enamel
Total Respondents—1,663					
Appearance from Sales Viewpoint	83	348	130	436	1,096
Sanitation and Ease of Cleaning	81	487	101	241	1,295
Resistance to Wear	136	737	71	112	973
Resistance to Rust and Corrosion	384	763	79	108	972
Resistance to Soaps and Alkalies	77	549	60	83	1,182
Resistance to Heat	159	572	59	98	907
Permanence of Finish	151	800	62	141	1,091
Total Number of Mentions	1,071	4,156	562	1,219	7,516
Number of Respondents Responsible for Mentions	507	1,040	245	570	1,489

Hot water and washing machines

a look into the laundry room of America with analyses of situations and problems, as well as solutions, leading to better wash results

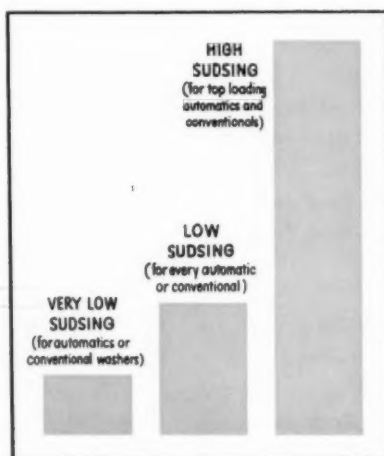
by Dorothy L. Hogg • FIELD REPRESENTATIVE, COLGATE PALMOLIVE COMPANY

WHILE hot water is one of our best buys, and becoming cheaper and more plentiful, many water heaters now in use are long past retirement age. All too many homeowners get the cart before the horse. They install an automatic washer and dryer, which greatly steps-up the demand for hot water — but decide to “cut corners” and try to use the old water heater. Often it is not until repeated washings in new automatic washers fail to come up to expectations that you hear about the trouble. The washer — or detergent — is usually blamed. The water heater is the last cause of poor washing results considered.

More and more homemakers are doing more washing at home. The sale of automatic washers and dryers continues to soar. The number of household furnishings and articles of clothing now washed instead of dry cleaned continues to grow. All this increases hot water demand. Today, 4 out of 5 households tasks require hot water.

Eighty per cent of the water used today is hot water (or should be.) Yet . . . 90% of the 30-gallon and many 40-gallon water heaters now in use can not supply enough hot water for consecutive loads of washing. In other words, only about 10% of water heaters in use today can deliver adequate hot water . . . a fact few homeowners recognize.

We all know that 140° to 160° water is necessary for really clean clothes. However, because the water heater has a setting of 160° to 180° does not assure the owner a sufficient supply of hot water when needed. The truth about hot water is that in most homes, 120° water is the exception rather than the rule! Most homes are lucky if they have 120° water — instead of 140° to 160°. At our practical Laundry Lab at Colgate-Palmolive, we use 120° water in our test runs because it is much more the average water temperature. We know that if 120° water washes our test bundles clean, hotter water will do even better.



Three classifications of home laundry detergents.

We have a long way to go in upgrading existing water heaters — of selling homemakers that hot water is an absolute “must” for really clean clothes in any automatic or conventional washer — and this is important, adding excessive amounts of detergents, bleaches, packaged water softeners will not make up for lack of hot water in home laundry equipment performance. In selling water heaters, remember that 3 out of 4 homes today use gas to heat the water used.

Two manufacturers — Ruud and

Rheem — have introduced their new Twin-Temperature of Duo-Temp gas water heaters — with one setting for laundry requirements and one for general household use.

These have sufficient storage rating, maximum usable draw (up to 88% of the water may be withdrawn before a 10° temperature drop occurs) and a fast and adequate recovery rating based on AGA Testing Laboratories standards of 1190 BTU per gallon of water raised 100° in temperature in one hour. These Twin-Temp Water Heaters have many advantages.

You will also want to keep up on the tremendous improvements made by electric water heater manufacturers. Home water heaters have radically changed to meet consumer appliance demands.

Variances in automatic washers

Automatic washers vary as to capacity, requiring from 15 to 35 gallons of hot (140° to 160°) water per load for acceptable soil removal, whiteness retention and bacteria destruction. We say 22 gallons is an average figure for the hot water demand. Average loading, washing and rinsing time runs 45 minutes (6 minutes for loading, 39 minutes for running). A study of normal household laundry averages 3 to 6 loads per week according to a survey made by

to Page HL-42 →

About the Author

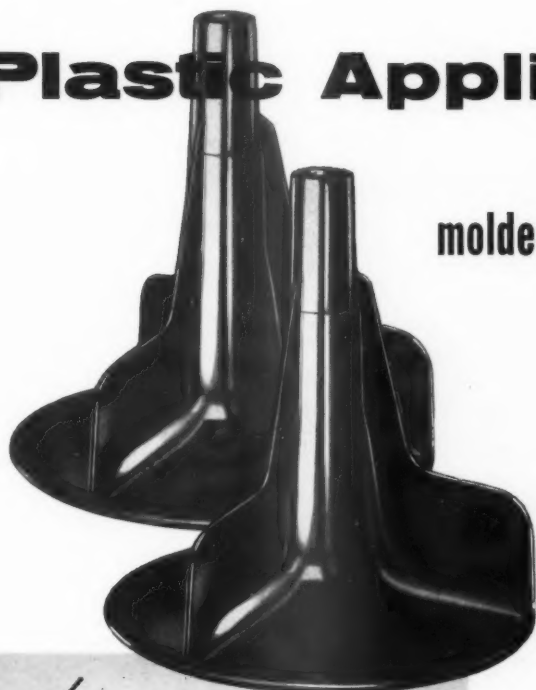
Dorothy L. Hogg has a unique varied background that particularly suits her to be the author of this special report*. One of the original Mary Proctor's with Proctor Electric Co., she was also with Nesco for three years where she held two positions, that of specialist in electrical appliances, and Home Service Director. Other stopovers in her professional career include 4 years in radio programming women's programs for Station KATE, Albert Lea, Minn., 2 years in TV con-

ducting luncheon programs for womens clubs in Cleveland and Columbus, 6 years as an ass't account executive on a large utility account, and before all that an education on the campus of the University of Minnesota in journalism and marketing. She has held her present position for the past two years, where with associate Joe Woodhead, she pioneered setting up a new concept for Colgate-Palmolive in educational and home service work.

*Detergents and other subjects in this report will be covered in a later issue.

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Friction wheels
Casters and V belt pulleys

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Pans, butter keepers
Rollers

AIR CONDITIONERS

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Cabinets
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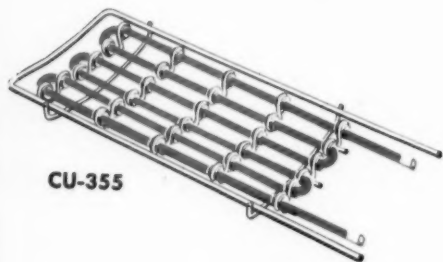
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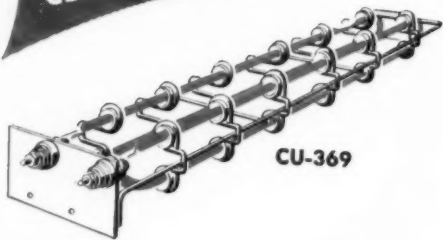
Tuttle's famous NYKELKROM Saddle-Loop and V-Saddle Loop elements lead the field in the dryer industry . . . as they also do in other appliance fields.

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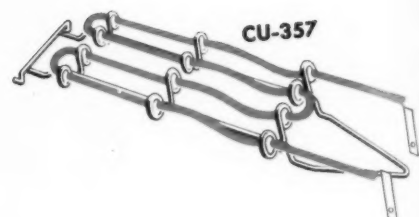
CLOTHES DRYERS



CU-355



CU-369

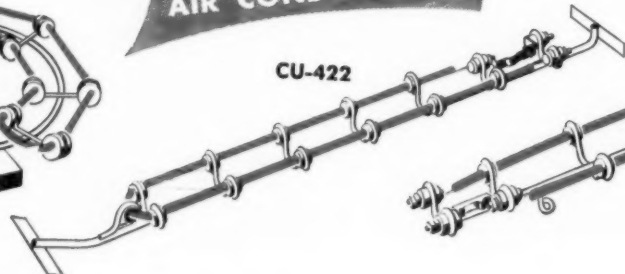


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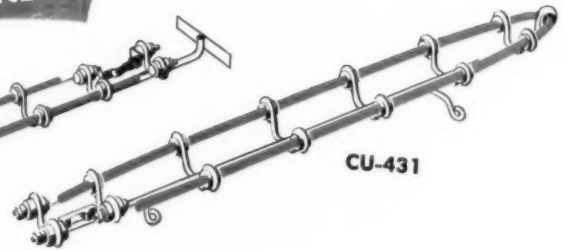
AIR CONDITIONERS



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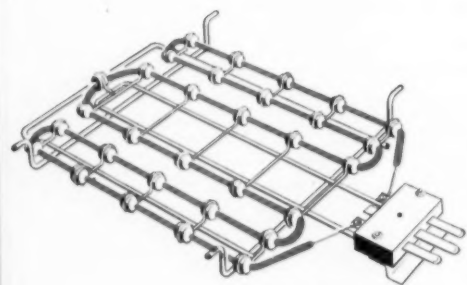


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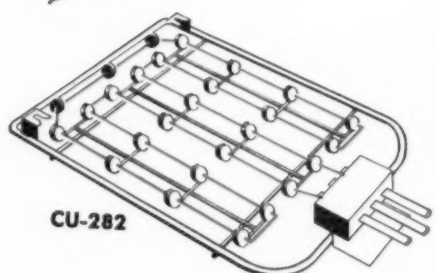


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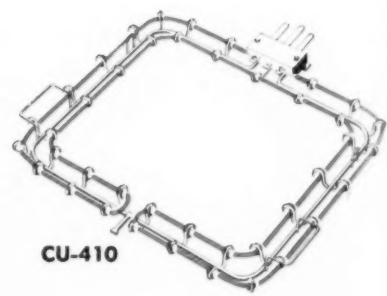
RANGES



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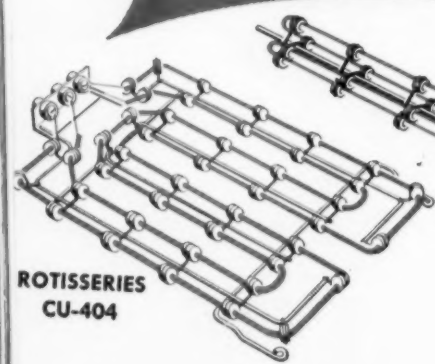


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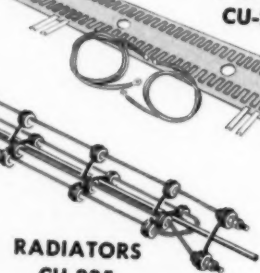
MISCELLANEOUS



ROTISSERIES
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IRONERS
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RADIATORS
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Stage set for 10th home laundry conference

story of annual conference growth explained by observer-participant;
tremendous value of the education program is detailed and explained

by Elizabeth Sweeney Herbert • HOME EQUIPMENT EDITOR, McCALL'S MAGAZINE

THE TENTH National Home Laundry Conference sponsored by the home laundry industry is scheduled for November in Chicago. The first of these conferences sponsored officially by AHLMA was held in Chicago but was a much more modest event.

Actually the precursor to AHLMA's home laundry conferences was a couple of huddles held annually at the time of the American Home Economics Convention in the mid-forties. A handful of home economists from the women's magazines and washer manufacturers concerned with puzzling problems dropped into their laps by the introduction of automatic washers sought joint council.

These gatherings outgrew a hotel suite in no time at all and extended to the auditorium of the New York Herald Tribune where it was possible to include more editorial people, more representatives from the home laundry manufacturers, home economists and technicians from the makers of laundering supplies and the textile group. At that point it became very apparent that this baby had graduated from kindergarten, and the great AHLMA took over the educational problem.

Scope of gatherings spreads

To William Shaw, who long was the skillful pilot of the industry's public relations program, goes the special credit for getting the editors and the manufacturers to sit down together. He quickly saw the advantage in extending the scope of these gatherings to include home economics teachers from colleges, supervisors of homemaking teaching in the country's public school system, extension workers and scientists from government agencies and bureaus.

Working behind the scenes as a sort of catalyst, he wisely left the program planning of the first conferences in the hands of that home economist group that had mothered the project. But, as Roy Bradt* once said in reviewing the early gatherings, "The majority of the problems dealt with really belonged to

the manufacturers instead of the editors." With such frank recognition of this fact, the home laundry industry rapidly assumed full responsibility for the national conferences.

It has been a remarkable record. *This is a history of cooperation in consumer education unequalled, I believe, by any other branch of American industry.*

The postwar vitality of the laundry appliance market in large part explains the sustained interest and need for the annual conference. Comparable to the rapid development of automaticity in laundry devices has been the spawning of new detergents, bluing, bleaches, starches and fabric finishes. We have come to associate with the term "modern fabrics" the word launderable. Truly, no aspect of the home laundering picture has remained static. It is not strange then that all groups concerned with this evolution have welcomed the opportunity for an annual exchange and up-dating on information pertinent to the entire field.

The conference has come to be accepted as a source of sound information by the magazine and newspaper writers, the utility and distributor home service women, the home economics teachers and extension leaders who attend. AHLMA, the host group, has similarly rec-

ognized the direct value in such an information exchange to its home economists, its research and sales engineers. The industry has not been unappreciative of the power of this total group to influence the ideas and the buying practices of millions of its customers.

The "Home Laundry Manual"

From the outset a full report of each conference has been made available to those who attend. "The proceedings book" is the term AHLMA uses, I think, but to thousands like myself it has come to be known as the annual "Home Laundry Manual." I've saved every one and hope they will go on and on until they comprise another famous Five Foot Shelf in my library. Truly this is a unique record of an industry compiling its own history. This manual seems to me to have been one of the most valued dividends of the conferences. Each year there has been an increased number of requests for a copy from individuals not able to attend. Homemaking teachers are frank to describe it as their most useful teaching tool in presenting the home laundering subject. Sending this proceedings book to a teacher is the next best thing to having her at the conference.

Continued on HL-42 →

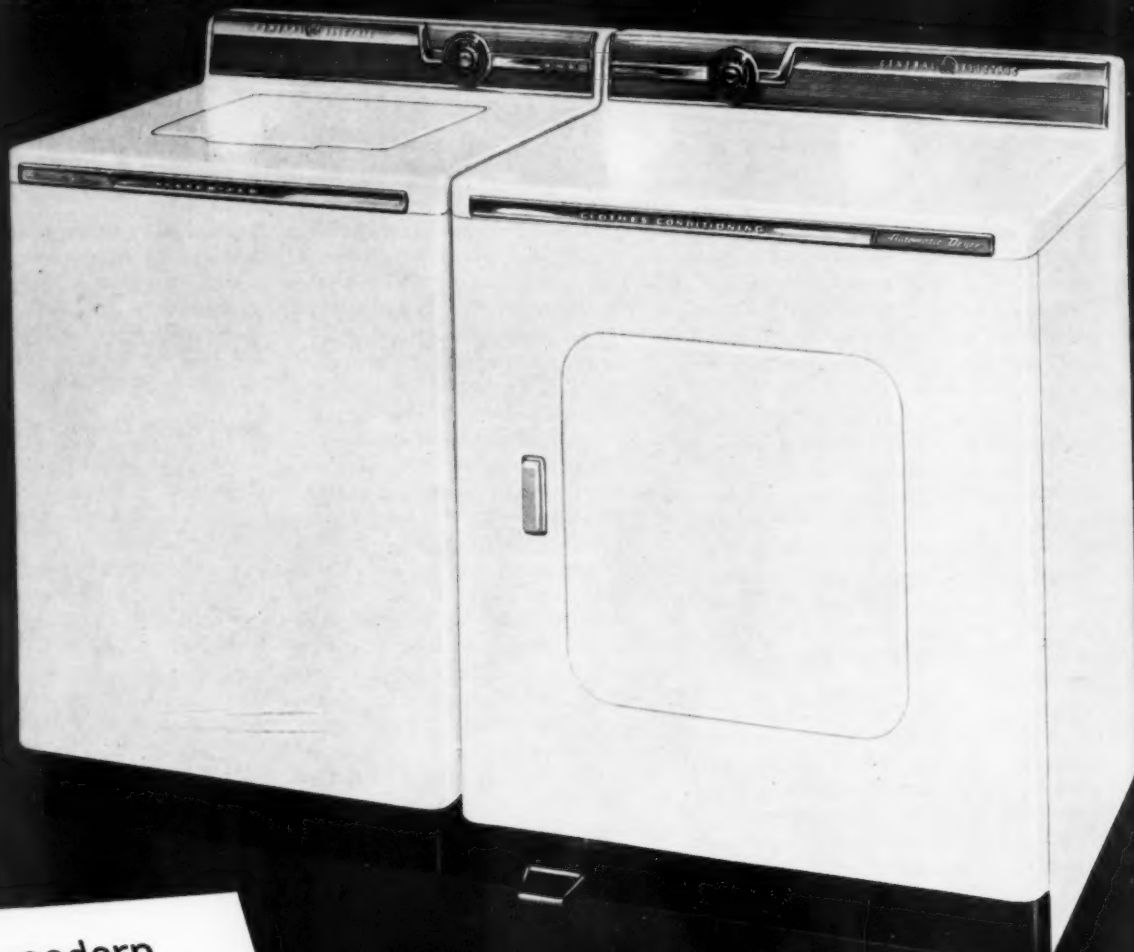


ELIZABETH SWEENEY HERBERT is not a newcomer to the pages of *finish*. Her bylined articles have been presented, with pride, by the editors many times. One of the best known personalities in the home economics field, at *McCall's* where she is household equipment editor, she also rides herd on the *McCall's* Test Kitchens, and the magazine's recently introduced "Use-Tested Tag" program. Her "Who's Who in America" listing shows she was assistant professor of Household Technology and assistant professor of Foods and Nutrition at Syracuse, her alma mater, where she received her Bachelor and Masters degrees before joining up with *McCall's*. Previously she served for some years as Director of Home Service for the Central New York Properties of the Associated Gas and Electric System. She was recently appointed a member of Agriculture Secretary Ezra Taft Benson's Home Economics Research Advisory Committee and is officer, past president or active member in a great number of national and state organizations and societies.

*Bradt is Vice President, Marketing, the Maytag Co.

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"Bell cow" of the appliance industry

**"unlimited growth" possibilities pointed out
for future home laundry appliance sales pic**

by *Ralph M. Spang* • GENERAL MANAGER HOME LAUNDRY
DEPARTMENT, THE HOTPOINT CO.

LONG range home laundry forecasts point to a nearly "unlimited growth" in terms of future home laundry sales, according to Ralph M. Spang, general manager, home laundry department, Hotpoint Co. Based on additional disposable income, new family formations and increases in wired homes, Spang predicts that by 1963 the industry will be selling over 5,000,000 automatic washers annually to the American consumer.

In support of this estimate, he pointed out that the greatest postwar growth of any major appliance occurred in home laundry products. In 1946 the industry sold 356,000 automatic washers, and in 1955 sold 3,187,000. Dryer sales in 1947 totaled only 38,000 while in 1955 they reached 1,085,000. This represents in 1955 a \$860,000,000 dollar achievement in washers and \$230,000,000 in dryers.

Emergence of automatic washer

Heretofore, the refrigerator has been considered the "bell-cow" of the major appliance industry. Many new dealers and distributors were franchised because the manufacturer had excellent sales producing refrigerators. Other white goods like ranges, freezers, washers, dryers, dishwashers, etc. were carried along with the refrigerator. However, as the automatic washer in the postwar years began to gain sales momentum, it slowly began to replace the refrigerator as a "first line sales tool." In the opinion of many observers, it is now the number one appliance dealers consider in determining what new lines to handle.

Touching on the automatic washer replacement market, Spang stated that the average life of an automatic washer is less than that of a refrigerator because it's more complicated mechanically. For that reason, replacement sales will regularly be higher for washers as their saturation increases. According to Spang, this replacement market increase tells a strong story for additional dealer sales in the next few years.

Three more factors enter into the increased sales forecasted, Spang said. These include the new sales of washers and dryers in color, the combination washer and dryer, and the possibility of using a second washer in the house.

Elaborating on color, Spang predicted that in the next few years home laundry appliances will lead the trend to color in the appliance industry. He stated that the color potential for washers and dryers appears to be almost unlimited.

Spang pointed out that kitchen appliances are faced with the problem of color matching, with the single colored units in a room with other appliances in white. "However," he continued, "in the case of laundry appliances, this problem is not a major factor. Washers and dryers are located in a separate part of the kitchen, the utility room, or the basement. Therefore, the 'matching' problem is eliminated. A purchaser can buy a pink or yellow washer without worrying about how the color will look in the kitchen. Any color will brighten a laundry area. Dealers can capitalize on this approach in merchandising and selling colored washers and dryers."

New idea in "Color" promotion

Spang stated that another important factor in color merchandising is that there need not be an inventory problem. A distributor or dealer can choose just one color and build an entire promotion around it, selling it as a feature rather than as a complete redecorating job.

Spang predicted that the industry will see many more two-washer homes in the future. "As families grow," he stated, "more and more housewives will be wanting a second washer in the kitchen or some other convenient location. She'll use it for quick washing jobs and partial loads. Convenience is becoming increasingly important in the home. We've seen the development of 2 and 3-radio homes and 2-car homes. We are now seeing the growth of homes with 2 television sets. Two-washer homes will become a logical part of this trend



RALPH M. SPANG

and should become evident within the next three years."

1965 automatic dryer picture

Turning to the expected sales increases of automatic dryers, Spang forecasted that by 1965 the industry will be selling 1,900,000 units. This is an increase of about 877,000 units over the 1955 sales figure, or approximately 87,000 units per year on an annual basis. Ownership saturation in 1965 will probably still be less than one-third of the prevailing market.

Both the washer and dryer forecasts revealed that the number of wired homes by 1965 would reach 56,200,000 as compared to the present 45,900,000 homes wired, Spang stated. That's an increase of 10,300,000 more homes electrically wired as a result of better electrical-living programs, as well as greater consumer acceptance of electrical appliances in the next years.

Spang lauded the detergent manufacturers for the "important role they have played in helping the appliance industry sell more washers and dryers." He said the constant technical research carried on by detergent manufacturers would assist in the future sales of home laundry products, too.

More research in the field of washability for automatic washers was cited as one of the continuing programs the appliance industry must conduct if additional sales of washers are to be made. Spang concluded, "A great deal of additional research is going to be required to keep pace with the public's washing and drying requirements."

HOT WATER CONTINUED

leading women's magazines. A study made by the Ruud Mfg. Co. showed that recovery rating of 30 gallons per hour (35,750 BTU) is necessary to keep pace with the demand of a sizeable group of washers having an above-average demand. So — the importance of adequate hot (140° to 160°) not warm (100° to 120°) water can not be over-emphasized.

A conventional or wringer-type washer uses approximately 39 gallons per load (wash and 2 rinses) but you would be absolutely amazed at the number of conventional washer owners who use their wash water not once or twice, but 3-4-5 and even 6 times! Adding more detergent, usually more bleach and/or packaged water softener for multiple loads. These same women re-use rinse water just about as many times. It is no wonder we hear about "detergent or soap" buildup! How can anyone expect clean clothes from such wash and rinse water?

An automatic washer requires from 15 to 35 gallons of hot water per load . . . to be used usually only once. The home with an automatic washer and dryer is a much better prospect for a new water heater because of the hot water supply and demand.

Today's homemaker — with her completely automatic washer and dryer, or her combination washer-dryer, has the finest home laundry equipment in the world. She has the widest and most complete range of good detergents and laundry supplies to choose from. While hot water is also an acknowledged necessity, we still have to do a big selling job to raise the percentage of homes equipped with an adequate water heater to meet present demands and future ones.

Until we convince homeowners that today's living and today's home laundry equipment must have hot water for acceptable performance, we will not have done our jobs.

"Dialing her sunshine"

Your time and labor saving automatic home laundry appliances are changing established work habits to provide more enjoyable living and to add hours of leisure for family activities. Today our modern homemaker "dials her sunshine" to dry her family wash any time, any place in the house — and in any kind of weather.

She is becoming more aware of the wide variety of laundry supplies, and — slowly but surely — we are putting over the reasons for adapting improved detergents and/or washing procedure. Our big job, however, is to speed up the "conversion" rate through sensible and common-sense mass education to millions of homemakers still doing things the hard way.

HL-42

DOMESTIC PICTURE CONTINUED

Labor relations, for example, are usefully served through the qualitative and quantitative exchanges through AHLMA's Industrial Relations Committee. Foreign trade is increasing as an AHLMA activity for this reason, as are engineering and research, governmental relations, service, and traffic. All serve the industry by providing a platform through which to work on management problems — a platform which is fortunately broad and solid.

Value of coordinated effort

In association activities which promote the industry and the industry's products, similarly 100% participation or nearly so is invaluable. Association exhibits are complete. Industry bulletins and releases are authoritative because all branches of the industry have had an opportunity to contribute to their creation and review their content for accuracy and appropriateness.

The home laundry appliance industry has a wonderful opportunity to keep up its activities in the mutual interest of all members and at the same time to compete vigorously on a high plane; serving not only itself, but especially the good of its customers, its employees, and the national economy.

May it ever be thus in AHLMA!

CONFERENCE CONTINUED

One gratifying recent development has been the increase in home laundry centers in homemaking departments of our secondary schools and home economics colleges. Though great progress has been made, the drive to get laundry equipment into schools must be a continuous one. And of equal concern to the home laundry industry is the problem of getting this equipment really included as a part of the homemaking teaching curriculum.

Stresses need to teach teachers

The majority of present homemaking teachers need to be educated in home laundering practices. The new crop of teachers in training in our home economics colleges obviously need exposure to this educational material. The very college teachers themselves are often inadequately informed.

AHLMA's success in attracting to the conferences this educator group has been an outstanding accomplishment. Participation in the annual program by college teachers and homemaking supervisors from the public school system is fine evidence of the Association's success and recognized sincerity. The home

laundry industry has served all industry in this healthy relationship of a cooperative business school project.

It may seem strange that I, a magazine editor, place such emphasis on that phase of the conference results dealing with the school group. Perhaps it is because I was once a teacher. Maybe, because my work on a woman's service magazine is in a sense participation in an adult homemaking education program. Well, isn't that what every maker of household equipment is faced with too? And the need for consumer education programs seems greater than ever!

Today's young homemakers are younger than they have been since the U.S.A. was "The Colonies." Their families are bigger and they are coming faster. These girls marry fresh from high school in an amazing percentage of cases. It is *there* — in the public schools — that we need to be preaching our gospel of better laundering if we intend to be most helpful.

Laundering is in all homes today. Modern automatic equipment has entrenched it — actually brought the chore back into the home in millions of cases.

This equipment the home laundry manufacturers are selling is being accepted on their sales terms as "fully automatic." It behooves the industry to use all available means of assuring that the operators of these devices are informed users. Push-button appliances must still cope with the vagaries of water, the differences in detergents, the multiplicity of fabrics.

In this postwar decade the home laundry industry has made commendable progress with its consumer education program. I believe the annual Home Laundry Conference has been the single most effective means of coping with the many-faceted problem. The manufacturers demonstrated an ability to profit from the experience of each conference. A success pattern has been established by building each year upon the learnings of the previous sessions.

The Tenth Annual Conference is on the horizon. As Ray *Halverson, Chairman of last year's conference, made his report to the association in January, he urged, . . . *"Be there, in Chicago, not just the committee people and the speakers, but everyone of you who possibly can. You are the hosts, and your attendance at the conference, full-time, for all sessions, and with minimum outside business, makes it a far more worthwhile occasion for your guests."* Amen to that!

*V. P. Sales, Hamilton Manufacturing Co.

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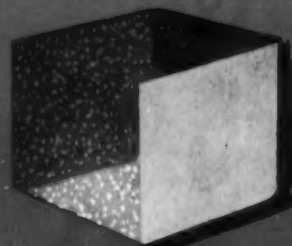
Not too many months ago Chicago Vit research set the pace with another "first"—a grey ground coat with high alkali resistance. Since that time there has been a growing desire and need for a **lighter grey** alkali resisting ground coat. Chicago Vit once again answers the need and announces this latest development for use on a wide variety of appliance parts. Here is a 1-fire finish that has outstanding workability, and covering power that lowers the boom on costs. And for added eye and sales appeal there are several companions to the grey in colors ! You'll be doing yourself a real injustice if you don't investigate this outstanding new development. Sales wise this may be just what you're looking for. Line up a demonstration today with your Chicago Vit representative or call us direct !

FOR FINEST FRIT • CHICAGO VIT

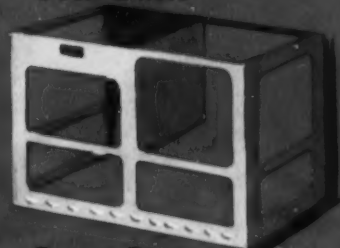
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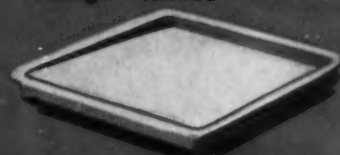
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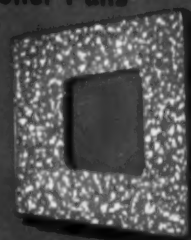
Oven Liners



Range Frames



Broiler Pans



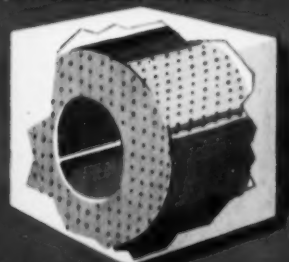
Washer Lid Interiors



Spinner Baskets



Drier Door Interiors



Drier Drums

HOT WATER CONTINUED

leading women's magazines. A study made by the Ruud Mfg. Co. showed that recovery rating of 30 gallons per hour (35,750 BTU) is necessary to keep pace with the demand of a sizeable group of washers having an above-average demand. So — the importance of adequate hot (140° to 160°) not warm (100° to 120°) water can not be over-emphasized.

A conventional or wringer-type washer uses approximately 39 gallons per load (wash and 2 rinses) but you would be absolutely amazed at the number of conventional washer owners who use their wash water not once or twice, but 3-4-5 and even 6 times! Adding more detergent, usually more bleach and/or packaged water softener for multiple loads. These same women re-use rinse water just about as many times. It is no wonder we hear about "detergent or soap" buildup! How can anyone expect clean clothes from such wash and rinse water?

An automatic washer requires from 15 to 35 gallons of hot water per load . . . to be used usually only once. The home with an automatic washer and dryer is a much better prospect for a new water heater because of the hot water supply and demand.

Today's homemaker — with her completely automatic washer and dryer, or her combination washer-dryer, has the finest home laundry equipment in the world. She has the widest and most complete range of good detergents and laundry supplies to choose from. While hot water is also an acknowledged necessity, we still have to do a big selling job to raise the percentage of homes equipped with an adequate water heater to meet present demands and future ones.

Until we convince homeowners that today's living and today's home laundry equipment must have hot water for acceptable performance, we will not have done our jobs.

"Dialing her sunshine"

Your time and labor saving automatic home laundry appliances are changing established work habits to provide more enjoyable living and to add hours of leisure for family activities. Today our modern homemaker "dials her sunshine" to dry her family wash any time, any place in the house — and in any kind of weather.

She is becoming more aware of the wide variety of laundry supplies, and — slowly but surely — we are putting over the reasons for adapting improved detergents and/or washing procedure. Our big job, however, is to speed up the "conversion" rate through sensible and common-sense mass education to millions of homemakers still doing things the hard way.

HL-42

DOMESTIC PICTURE CONTINUED

Labor relations, for example, are usefully served through the qualitative and quantitative exchanges through AHLMA's Industrial Relations Committee. Foreign trade is increasing as an AHLMA activity for this reason, as are engineering and research, governmental relations, service, and traffic. All serve the industry by providing a platform through which to work on management problems — a platform which is fortunately broad and solid.

Value of coordinated effort

In association activities which promote the industry and the industry's products, similarly 100% participation or nearly so is invaluable. Association exhibits are complete. Industry bulletins and releases are authoritative because all branches of the industry have had an opportunity to contribute to their creation and review their content for accuracy and appropriateness.

The home laundry appliance industry has a wonderful opportunity to keep up its activities in the mutual interest of all members and at the same time to compete vigorously on a high plane; serving not only itself, but especially the good of its customers, its employees, and the national economy.

May it ever be thus in AHLMA!

CONFERENCE CONTINUED

One gratifying recent development has been the increase in home laundry centers in homemaking departments of our secondary schools and home economics colleges. Though great progress has been made, the drive to get laundry equipment into schools must be a continuous one. And of equal concern to the home laundry industry is the problem of getting this equipment really included as a part of the homemaking teaching curriculum.

Stresses need to teach teachers

The majority of present homemaking teachers need to be educated in home laundering practices. The new crop of teachers in training in our home economics colleges obviously need exposure to this educational material. The very college teachers themselves are often inadequately informed.

AHLMA's success in attracting to the conferences this educator group has been an outstanding accomplishment. Participation in the annual program by college teachers and homemaking supervisors from the public school system is fine evidence of the Association's success and recognized sincerity. The home

laundry industry has served all industry in this healthy relationship of a cooperative business school project.

It may seem strange that I, a magazine editor, place such emphasis on that phase of the conference results dealing with the school group. Perhaps it is because I was once a teacher. Maybe, because my work on a woman's service magazine is in a sense participation in an adult homemaking education program. Well, isn't that what every maker of household equipment is faced with too? And the need for consumer education programs seems greater than ever!

Today's young homemakers are younger than they have been since the U.S.A. was "The Colonies." Their families are bigger and they are coming faster. These girls marry fresh from high school in an amazing percentage of cases. It is *there* — in the public schools — that we need to be preaching our gospel of better laundering if we intend to be most helpful.

Laundering is in all homes today. Modern automatic equipment has entrenched it — actually brought the chore back into the home in millions of cases.

This equipment the home laundry manufacturers are selling is being accepted on their sales terms as "fully automatic." It behooves the industry to use all available means of assuring that the operators of these devices are informed users. Push-button appliance must still cope with the vagaries of water, the differences in detergents, the multiplicity of fabrics.

In this postwar decade the home laundry industry has made commendable progress with its consumer education program. I believe the annual Home Laundry Conference has been the single most effective means of coping with this many-faceted problem. The manufacturers demonstrated an ability to profit from the experience of each conference. A success pattern has been established by building each year upon the learnings of the previous sessions.

The Tenth Annual Conference is on the horizon. As Ray *Halverson, Chairman of last year's conference, made his report to the association in January, he urged, . . . "Be there, in Chicago, not just the committee people and the speakers, but everyone of you who possibly can. You are the hosts, and your attendance at the conference, full-time for all sessions, and with minimum outside business, makes it a far more worthwhile occasion for your guests. Amen to that!

*V. P. Sales, Hamilton Manufacturing Co.

CHICAGO VITREOUS ANNOUNCES

a NEW, IMPROVED

LIGHT GREY

Alkali resisting
GROUND COAT

- better than ever **WORKABILITY**
- cost reducing **COVERING POWER**

Not too many months ago Chicago Vit research set the pace with another "first"—a grey ground coat with high alkali resistance. Since that time there has been a growing desire and need for a **lighter grey** alkali resisting ground coat. Chicago Vit once again answers the need and announces this latest development for use on a wide variety of appliance parts. Here is a 1-fire finish that has outstanding workability, and covering power that lowers the boom on costs. And for added eye and sales appeal there are several companions to the grey in colors ! You'll be doing yourself a real injustice if you don't investigate this outstanding new development. Sales wise this may be just what you're looking for. Line up a demonstration today with your Chicago Vit representative or call us direct !

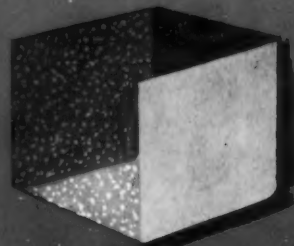
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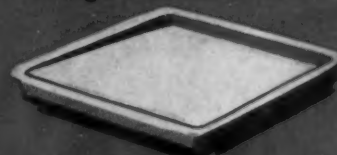
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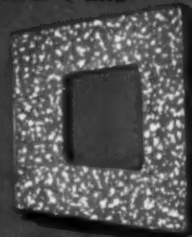
Oven Liners



Range Frames



Broiler Pans



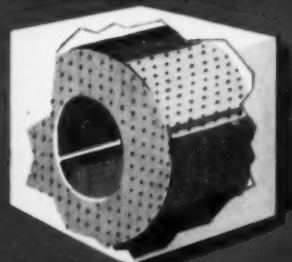
Washer Lid Interiors



Spinner Baskets



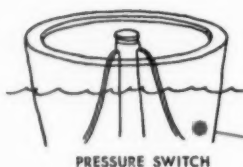
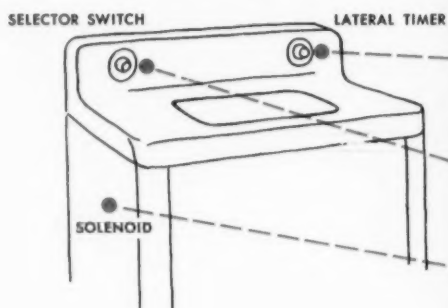
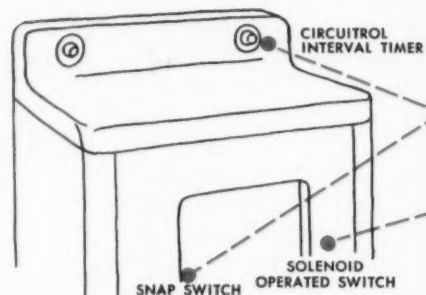
Drier Drum Interiors



Drier Drums

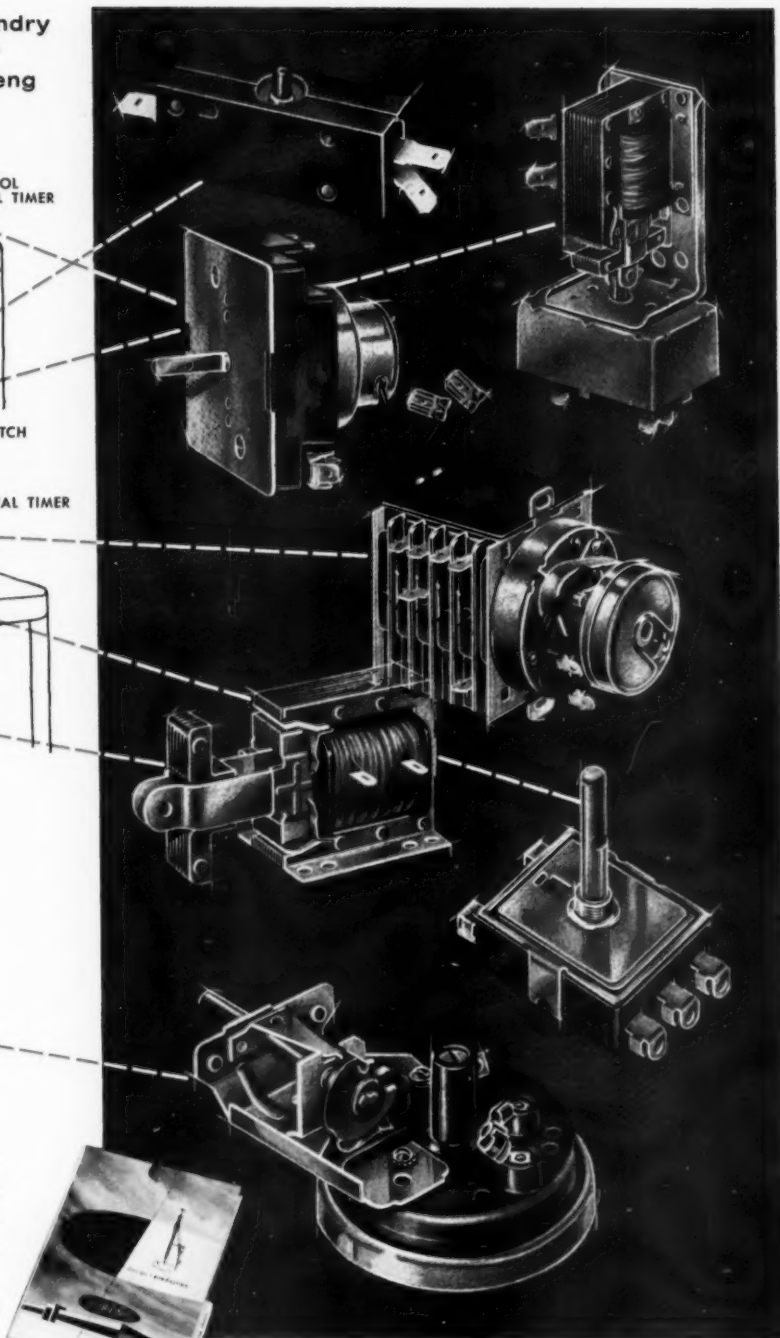
SERVICE—to help solve your appliance control problems

You include years of Home Laundry Engineering Experience in your products when you specify Soreng electrical components.



Soreng controls can be custom designed to meet your specific requirements at mass production prices.

For complete facts write for your data folder on Soreng Controls.



CONTROLS COMPANY OF AMERICA

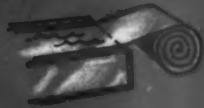
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Every Step of the Way



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Rigid quality control *every step of the way* is the Follansbee way of producing cold rolled strip that will meet your most *exacting* specifications—and give you a better product. At Follansbee, quality is in the hands of experienced and skilled craftsmen who take pride in delivering the best cold rolled strip in the industry.

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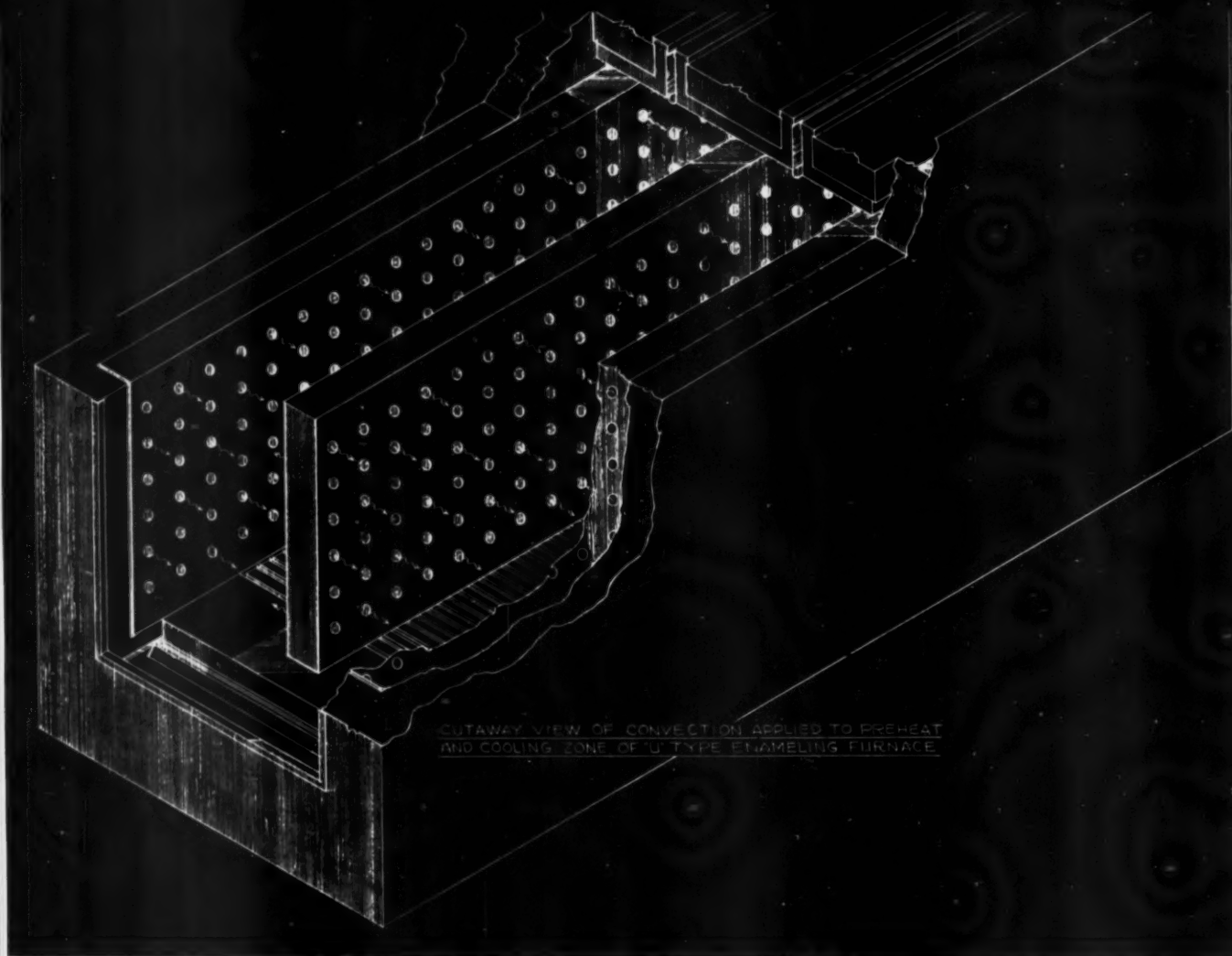
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A new era for enameling furnaces

convection takes its place with radiation as a source of heat control in the enameling furnace of the future

by E. W. Dany • VICE PRESIDENT & CHIEF ENGINEER, FERRO CORP., CLEVELAND



WE are on the threshold of a new era for enameling furnaces. Because the maturing temperature of porcelain enamel frits is continually being lowered, the enamel furnace builder has been forced to change his designs accordingly.

Product design changes necessitate further development by the furnace engineers. Many enameled parts of today and many more of the future will be complex sub-assembled cabinets. Double

metal thickness will become standard instead of the exception.

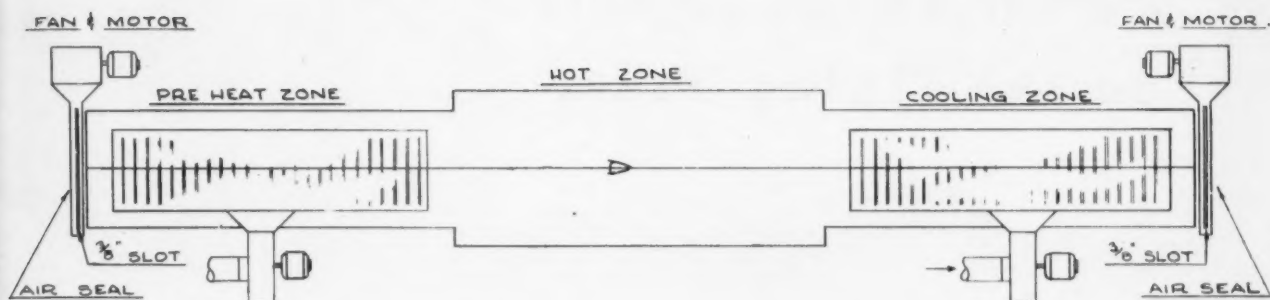
As the operating temperature of the furnace decreases, the problems of the furnace builder increase. Uniformity of temperatures inside a high-temperature furnace (2000°F.) is a relatively simple problem and easily accomplished; however, as one approaches 1000°F., this problem of even heat distribution becomes more acute.

Radiation from the heat source cannot be utilized as the sole heating medium because of the resultant great differential of temperature from hearth

to roof, whether it is a muffle type, electric or radiant tube furnace.

This important heat distribution problem is further emphasized by the fact that our enamel firing cycle is 3 minutes or less on 90% of current products, and 1/8 inch metal parts are fired down in seven minutes.

Warpage of the fired product is often due to irregular heating. If the product is an under-sink cabinet or complex air conditioner housing and subjected to temperature variation of 100°F. from top to bottom or one side to the other, much to the enameler's disgust, disas-



STRAIGHT THRU FURNACE @ CONVECTION

ADDITION OF CONVECTION ADDS 30'-0" AIR CIRCULATION ZONE TO EACH END OF FURNACE

- RESULTS :
- ① 10-20% FUEL SAVINGS
 - ② GREATER TEMPERATURE UNIFORMITY
 - ③ UNIFORM HEATING OF WARE

THE SAME RESULTS ARE EXPERIENCED WHEN CONVECTION IS APPLIED TO THE "U" TYPE FURNACE

trous results may occur. Naturally, the designer of the product is blamed and, in many cases, rightfully so. However, a happy medium must and will result when designers thoroughly understand the problems.

The role of the furnace designer

To close the breach between the product designer and the enameler has been the problem of the furnace designer. Toward that end our company has recently completed a great deal of research and development on a new type of enameling furnace. During the past 24 months several existing furnaces were radically changed, and several new ones were built, along revolutionary designs. A multipoint recording pyrometer was conveyed through these furnaces in the Bozsini box* approximately ten feet behind the test cabinet. Six thermocouples were attached to various faces of the cabinet, and actual metal temperatures were recorded. The defi-

ciencies of the furnaces tested were recorded on the pyrometer chart, and in due time an ideal furnace chart was realized.

Preheat and cooling cycle critical

It soon became evident that it was equally as important to maintain a uniform temperature within the product as

it passed through the preheat zone of the furnace, as it was to maintain a uniform temperature in the firing zone. Further tests convinced us that the rate of cooling and ability to cool the product uniformly greatly affected the warpage of the product.

As a result of this work, a new enamel furnace design was attained with a furnace having several controllable convection heated zones in the preheat and also in the cooling section. Air velocities were studied with particular emphasis on dirt circulation. Here an optimum velocity was determined and included in our furnace design standards.

The high temperature of the air being circulated necessitated sheet alloy ducts and alloy bladed fans with alloy housings. Naturally, this type of heating will result in a more expensive furnace; however, the use of convection in preheat and cooling zones has resulted in a fuel savings of 10% to 20%. Both U-type and straight-thru furnaces were tested, and in both designs fuel savings were effected.

Temperature charts of existing furnaces showed radical changes after the

Elmer Dany

"We are on the threshold. . . ."



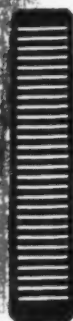
*The Bozsini box is a heavily insulated alloy box, aluminum lined, containing a six point battery driven pyrometer. It can operate in temperatures up to 1600°F. without damage to the equipment.

Performance Report on the Flying Press-



400 aluminum .065 plates every minute. Of .062" gauge stock these were formerly pressed at 110 per minute on conventional equipment.

Window channel molding production doubled as Wean Flying Press gives manufacturer 225 feet per minute.



400 E's and I's every minute instead of the 180 made on slower, conventional presses.

Revolutionary Wean Press continues to amaze the industry

Since it was first introduced to industry, the Wean Flying Press has commanded the interest of imaginative production people.

On paper, it looked good. Tests on the hand made prototype were even more convincing. But, could a production model achieve such levels under actual operating conditions?

For the answer—note the typical production figures set down here. In every case, the Wean Flying Press, using standard die sets, has established a performance record.

Why not acquaint yourself with this amazing press now? Contact the Wean Sales-Engineer in your area or write direct.

Wean

EQUIPMENT CORPORATION

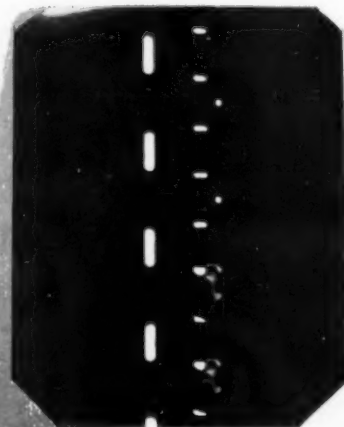
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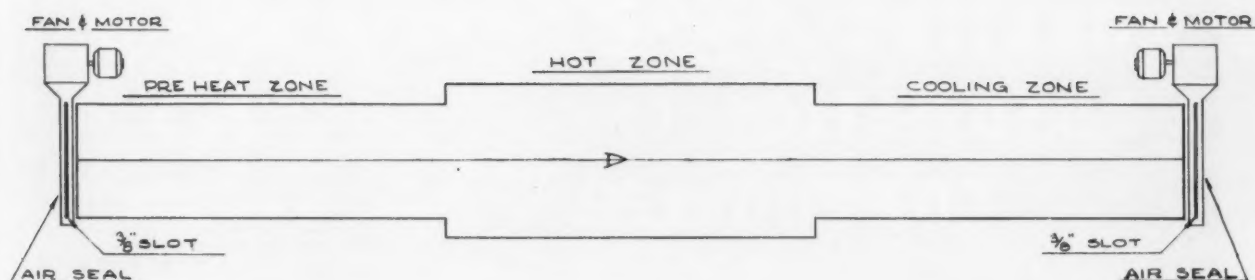
Cable: WEANCOR

Wean



Shallow draw and punch work on .065 gauge stock boosted to 400 pieces per minute by Wean Flying Press.





CONVENTIONAL STRAIGHT THRU FURNACE

CONVENTIONAL FURNACE HAS $\frac{3}{8}$ " WIDE SLOT AIR SEAL AT EACH END

ENAMELING FURNACE CONTINUED

addition of convection in preheat and cooling zones. In each case it was generally agreed that the addition of the convection zones resulted in a fuel savings and improved the quality of the product.

"Low" temperature enamels

With furnaces operating at 1435°F using conventional frits, conveyor speeds were increased in most cases with a resultant increase in pay load and at a

substantial savings in fuel cost. With furnaces operating at 1200°F using new developments in low temperature frits, parts of complicated design were successfully enameled with a minimum amount of warpage. Identical parts enameled at 1435°F were not acceptable due to excessive warpage, demonstrating the practical advantage of lower temperatures.

Our company has already installed several production furnaces of the U-type and straight-thru type utilizing controllable convection heating cycles in both preheat and cooling sections.

These furnaces are used two shifts per day with improved results at 1435°F.

Firing aluminum enamels

Several continuous and batch type enameling furnaces have also been installed for firing aluminum enamels. These operate in 960° - 1000°F. range. Here, again, convection type furnaces showed a decided advantage compared to the conventional radiant heated unit. They produced more pay load with equal fuel costs. A greater temperature uniformity was evident in the convection furnaces and the quality of the finished product was superior.

In summary, the addition of convection heat to one or all sections of an enameling furnace will increase the cost of same because of the high temperature nickel-chromium alloy components that are used to convey this high temperature air. No attempt has been made to determine the effective life of these alloy ducts and fans.

OPERATION REPORT NEXT

A complete finishfoto and editorial report on the first complete continuous porcelain enameling plant incorporating the new combination radiation-convection type furnace for large capacity enameling of aluminum and aluminized steel is next in this series of up-to-date reports on the development on the porcelain enameling plants and furnace engineering. This report details processing of low temperature enamels for aluminum and aluminized steel and is about the new installation at Connersville, Ind., The Porcelain Steel Corp. Features of this installation to be given full study will include data on Porcelain Steel's straight through continuous operation, which uses either manual or automatic spray application interchangeably, as well as information on their lay down conveyor set-up that provides for continuous flow. What's more, there will be pictures showing processing of 4'x22' porcelain enameled corrugated sections. As for the continuing finish reports, upcoming are analytic reports on a number of new developments in firing porcelain enamel, including an analysis of an improved radiation type furnace.

Ed Note: The trend in porcelain enameling for appliances and other conventional sheet metal products has been to lower maturing temperatures. (This is ignoring the development of "high temperature" enamels and ceramic coatings for specialized uses - 1800°F. to 2000°F.)

Lower temperatures (900°F. to 960°F. for aluminum enamels and 1200°F. to 1300°F. for steels) mean less warpage, much greater latitude for the product designer and a wider selection of gages and types of metals.

With these developments and the requirement for much closer control of firing temperatures, the furnace builders have been busy on this problem, as is indicated in this article by the veteran furnace designer, Elmer Dany.

ROASTING *NOW* AUTOMATICALLY CONTROLLED

*ANOTHER
NEW*

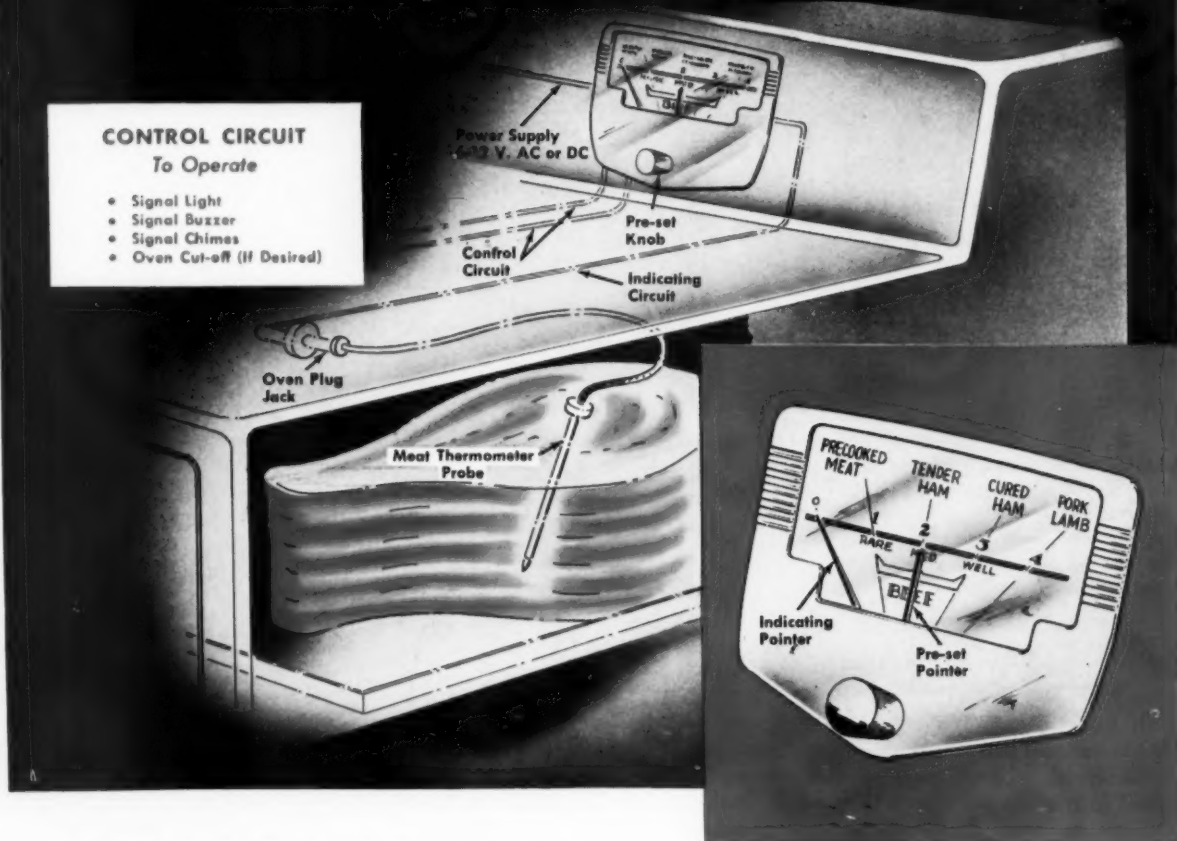
KS

DEVELOPMENT

CONTROL CIRCUIT

To Operate

- Signal Light
- Signal Buzzer
- Signal Chimes
- Oven Cut-off (If Desired)



Last year, the K-S Electric Meat Thermometer made news by outmoding the stoop, squint and guess routine for roasting. Its indicator, in full view on your range instrument panel, gives the cook reliable information on the progress of the roasting cycle until it is finished to a "turn", fit for the most discriminating epicure.

Something New has been added—AUTOMATION

When the roast or fowl goes into the oven, the cook sets a pointer on the instrument to exactly the degree of doneness she desires. As roasting proceeds, a

second pointer moves up indicating the progress of the roasting cycle.

When this indicating pointer reaches the set point, a signal notifies the cook. In addition, if you desire, it will turn off the oven. Thus the cook can devote her full attention to other matters without jeopardizing the perfection of her main dish.

Consider for yourself the value and sales appeal of this new K-S development. Include it in your range.

7501

KS

**KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN**

LETTERS CONTINUED

finish helpful to designer

Gentlemen: The writer is employed as a Senior Engineer and is currently working on the design of a weighing machine including a stainless steel cabinet with stainless steel trim. I recently saw the July issue of your magazine *finish* and find that this publication will be very helpful to us in the design of similar machines. We design and manufacture a line of weighing and packaging machines, as well as precision motors and instruments. I shall appreciate your putting me on your mailing list . . .

J. T. Patrick
Senior Engineer
Wright Machinery Company
Durham, North Carolina

Ed. Note: We're looking forward to that new stainless steel weighing machine when it's developed and hope that the following issues of *finish* are a continuing support to Engineer Patrick and his department. Would Mr. Patrick keep us in mind and let us publish a photo of his product when it's ready for the market?

Safety precaution

Gentlemen: I may be wrong, but the lady on the right in the picture on page 20 of the June, 1956, issue has a bad habit of using her hands up and thumb down — usually anyone operating a press brake uses their hands just the opposite for safety reasons. It saves fingers when you get on smaller pieces!

O. D. Hitchcock
Portable Elevator Company
Bloomington, Illinois

Ed. Note: You're right. *Finish* editors were amazed at the number of letters calling attention to the lady's thumb and delighted at the widespread "safety consciousness" of our readers.

A world of information!

Gentlemen: The information found in *finish* concerning porcelain enameled appliance manufacture is very helpful in my quality and process control. It would be greatly appreciated if I would be considered for addition to your controlled circulation list. Also, John Hall, who is a ceramic engineer and foreman in our department, would appreciate receiving the same consideration.

Robert J. Brinkman
Senior Production Engineer
Frigidaire Div., GMC
Dayton, Ohio

Ed. Note: Reader Brinkman should find much more in the issues of *finish* that are pertinent to his own operations. As for the most recent, may we suggest last month's Maytag report which contained data on, not only porcelain enamel, but organic finishing, plating, metal fabrication, etc. Both he and Ceramic Engineer Hall have been entered on the lists as regular subscribers.

finish SEPTEMBER • 1956

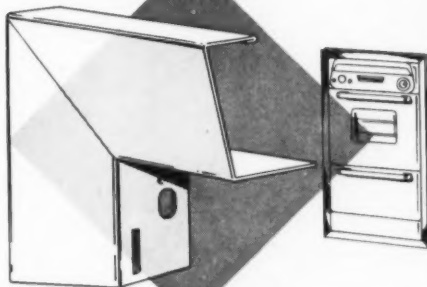
Actual case histories

of unusual design problems
solved by

Pyramid Mouldings

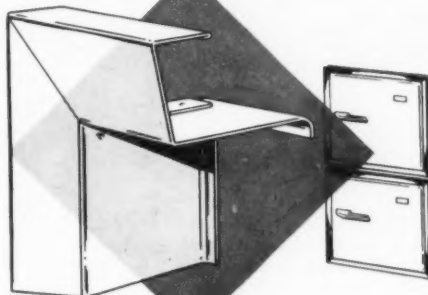
Pyramid Mouldings

Design Clinic



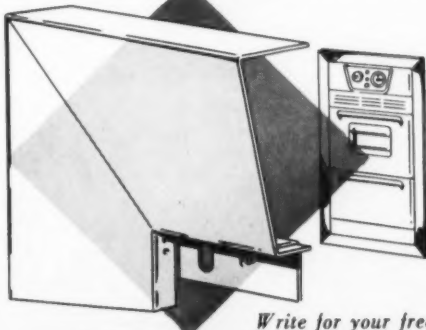
FROM HOT

A standard frame for the built-in oven! Seems impossible in a field so new . . . yet Pyramid has done it with their one-piece, rolled frame that eliminates the hazards of sharp corners and combines smart styling with tool free savings.



TO COLD

Refrigerators have "holed-up" too. And this one-piece frame . . . designed and roll formed by Pyramid . . . showed considerable cost savings while meeting every exacting requirement for positive uniformity and smart appearance.



AND BACK AGAIN

And here's a special oven frame that met the precise demands of a manufacturer who wanted a wide, scratch-free, glistening surface to reflect highest quality. Pyramid produced it . . . as it can produce the frame or trim you need, for your product.

Write for your free "Plan Book of Metal Mouldings."

Pyramid Mouldings Inc.

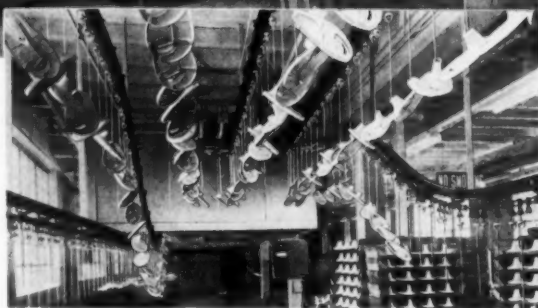
5365 WEST ARMSTRONG AVE., CHICAGO 30, ILL.
NEW YORK . . . CALIFORNIA

Hamilton Beach too, Chooses the

BURDETT *"Radiant Heat"* Multi-Pass Finishing System



The name of Hamilton Beach has long been a household standard of highest quality. These fine products are now even finer thru the recent installation of a specially engineered Burdett, Ceiling-hung, multi-pass "A" Type, "Radiant Heat" Finishing System. Equipped with a four-pass conveyor, the Burdett Finishing System has removed the entire production load from the floor. Former outside purchases of finishing service has been eliminated with a noteworthy saving in cost and increased production. The majority of the production of this new system is high quality, high gloss synthetic white enamel, baked in a 17 minute cycle at 300° F. The system, however, provides a flexible temperature range from 200° to 400° F., to satisfy any need for change of baking specification on future production. Conveyor speed is variable from 6 to 15 FPM. Production carrying hooks may be adjusted on conveyor to 6", 9" or 12" spacings to compensate for larger or smaller pieces to be handled. Operating temperature is reached in nine minutes from a cold start. The Burdett System is completely automatic. Control panel is of cabinet type—totally enclosed and dust-proof—



easily accessible to all components. Maintenance has been minimized and greatly facilitated by platform mounting at end of oven and at oven level. Controls and safety equipment fully meet Associated Factory Mutual Standards. This installation is merely one of thousands that have revolutionized production output and standards of quality in "famous-name" plants across the country and simultaneously effected some real cost cuts. Investigate the advantages of the Burdett "Radiant Heat" Finishing Systems as applied to your plant.

**We invite
your inquiry
for complete
details**

Write for the Burdett story!

BURDETT
MANUFACTURING COMPANY

4918 South Monitor Avenue, Chicago 38, Illinois

DETROIT

PHILADELPHIA

NEW YORK

CLEVELAND

DALLAS

Manufacturers of
COMPLETE FINISHING SYSTEMS — "RADIANT-HEAT" SYSTEMS, OVENS, HEATERS,
AIR MAKE-UP UNITS, SPRAY BOOTHS AND WASHERS



McGRAW TO BUY SPEED QUEEN

McGraw Electric Co., Elgin, Ill., has concluded a deal for the acquisition of Speed Queen Corp., Ripon, Wis., manufacturer of clothes washers, dryers, and commercial laundry equipment. The deal is subject to the approval of Speed Queen shareholders, who will meet August 28. McGraw will acquire 400,000 sq. ft. of manufacturing space from Speed Queen, which will be operated as a division.

In a letter to stockholders McGraw also disclosed that the electric company's net income in the six months ended June 30 rose to \$7,338,000, equal to \$3.45 a share, from \$4,803,000, or \$2.28 a share, a year ago.

Net sales rose to \$93,905,000 from \$69,922,000.

ROGAN TO CARRIER QUALITY CONTROL POST

The appointment of Leonard J. Rogan as quality control superintendent for Carrier Corp.'s Day & Night and Payne Divisions at Monrovia, Calif., has been announced by Harold Clifton, manufacturing department manager for the two divisions.

BRYANT ERECTS WAREHOUSE

Construction has begun on a 100,000 sq. ft. warehouse for Bryant Div., Carrier Corp., Indianapolis, according to Ronald N. Campbell, Bryant's general manager. The warehouse is the latest in a series of expansions for Bryant. The company has under construction a new general office building, plus engineering and research laboratories, scheduled for completion on August 31.

7 NEW WATER CONDITIONING FOUNDATION MEMBERS

The following companies were recently named members of the Water Conditioning Foundation: Water Service Mfg. Corp., Milwaukee; Cuno Engineering Corp., Meriden, Conn.; RainSoft Water Conditioning Co., Bensenville, Ill.; Fels-Naptha Soap Co., Philadelphia; Chemical Process Co., Redwood City, Calif.; Hays Mfg. Co., Erie, Pa.; and Peerless Water Softener Co., Kalamazoo, Mich.



PACKER RECEIVES MERIT AWARD FROM WESTINGHOUSE

Lewis Packer (L), who holds more than 20 patents in the motor engineering field, has been given for his work in this area the Westinghouse Order of Merit, the company's highest award. He has developed nearly all of the motors used in Westinghouse portable appli-

ances. The award was presented to him by Chris J. Witting, Westinghouse vice president and general manager of consumer products.



WESTINGHOUSE UPS SIMONS TO MANUFACTURING MGR.

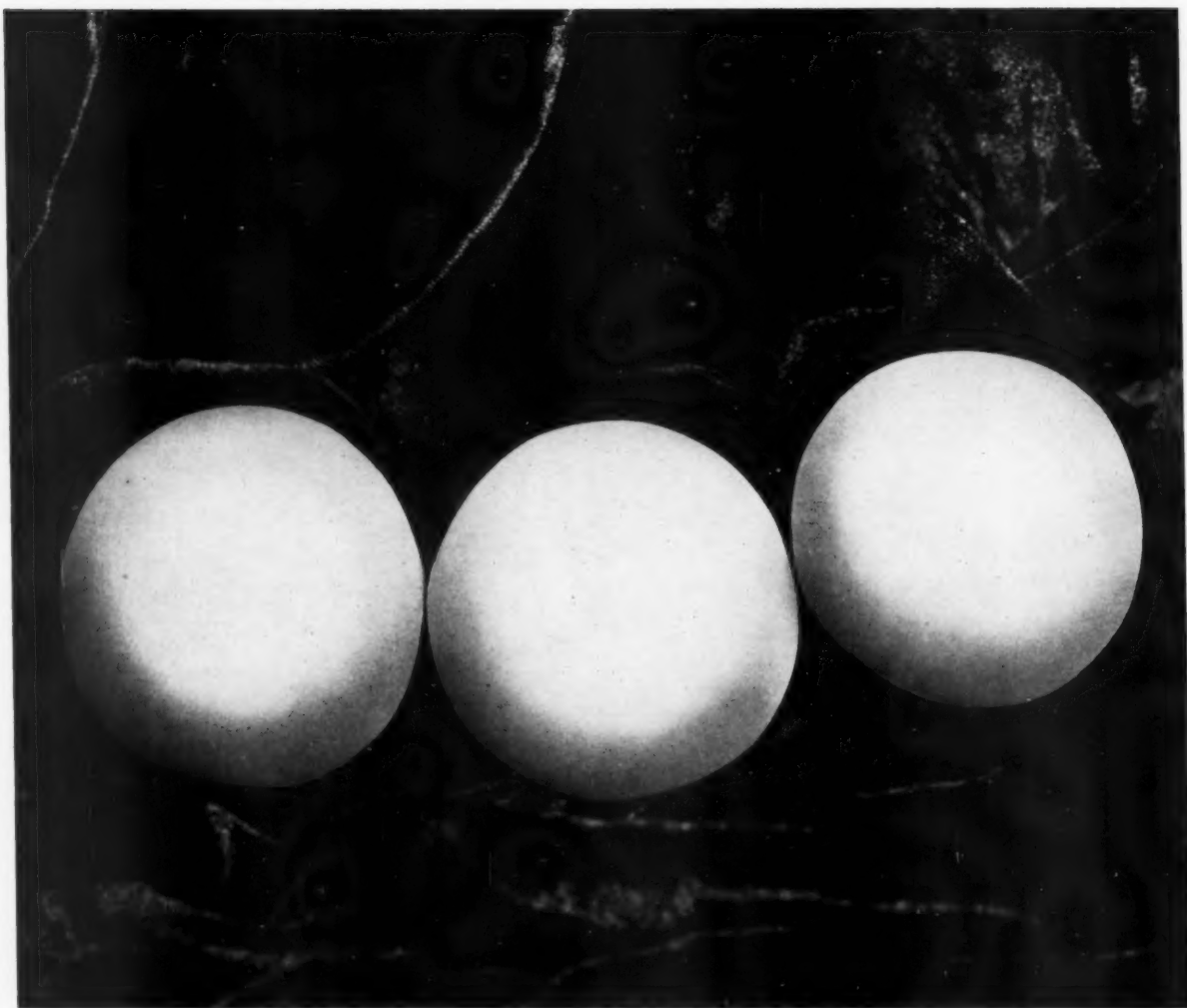
Appointment of J. B. Simons (above) as manager of manufacturing, Mansfield, Ohio, Westinghouse plant has been announced by C. L. Van Derau, general works manager, and D. B. Fighter, works manager. J. L. Lannan has been appointed to superintendent of the enameling divisions, replacing Simons. Replacing Lannan as assistant superintendent is Glenn E. Heuss.

H. D. Kelty has been named manager of the vacuum cleaner dept. W. M. Kline, Jr., has been named to head the newly-created custom kitchens dept.

MANAGEMENT SEMINAR ON PROFITABLE BUSINESS PRACTICES sponsored by the Architectural Div. of PEI, was held at the Ohio State University, June 11-15. Seated from left to right at the table: R. M. Gillespie, Ferro Enameling; R. Packer, Texlite; W. H. Chapman, National Metal Products; T. H. Wiebell, Barrows Porcelain Enamel; O. S. Signer, Bally Metal Products; G. H. Eggleston, Kaiser Metal Products; M. Patchen, Emco Porcelain Enamel; R. P. Guilbault and E. M. Brignac, Jr., Industrial Enameling Div., Industrial Electric; A. J. Prenger,



Enamel Products; A. D. Shaver, Bettinger; F. B. Reese, Ingram-Richardson; R. R. Sherrill, Bulward Corp.; R. D. Bartlett, Atlas Enameling; J. W. Vicary, Ervite; and J. K. Keating, Challenge Stamping & Porcelain. Others are W. C. Rosenthal, Ervite; R. Allen, Architectural Porcelain Constructors; D. C. Harris, Porcelain Steel; H. V. Penton, Cameo; J. B. McMath, Jr., McMath-Axilrod; and H. R. Spencer, Jr., Erie Enameling. Standing are J. C. Oliver, PEI, and Prof. F. E. Gillis, Massachusetts Institute of Technology.



MCDANEL NEW IMPROVED HIGH DENSITY GRINDING BALLS WEAR LONGER—GRIND FASTER

Improved manufacturing procedures and higher firing temperatures make the New McDanel Super High Density Grinding Ball even better than before! You get a superior grinding ball that retains its shape and lasts much longer. Complete vitrification gives extra

toughness, less pickup and contamination and greater mill economy. 2½", 2", 1¾", 1½", 1¼", 1", ¾" and ½" sizes. 3" size on request. Change to New McDanel Super High Density Grinding Balls today. You'll begin to realize more profit and economy from your present mills if you do.



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Send for Bulletin B1-56
today. Get the facts on
better ball mill grinding.



REINBOLT TO WHIRLPOOL- SEEGER MANAGEMENT POST

Appointment of Charles A. Reinbolt, Jr. to the new position of general man-



ager of the kitchen division of Whirlpool-Seeger Corp., St. Joseph, Mich., has been announced by George T. Stevens, director of merchandise development. Reinbolt was formerly vice president of Edgewater Steel Co. and general manager of its Tracy Kitchens Div.

FEDDERS-QUIGAN NAMES FORD ASSISTANT TO VICE PRESIDENT

Thomas H. Ford has been named assistant to the vice president of Fedders-Quigan Corp., Maspeth, Long Island, N. Y., announced U. V. Muscio, vice president. Ford was formerly product manager, air conditioning dept. for Whirlpool-Seeger Corp.

AIR-CONDITIONED SCHOOL SETS ATTENDANCE RECORD

The Belaire School in San Angelo, Texas, believed to be the first completed air-conditioned elementary school in the United States, completed its first year of operation in June with a 97.4% attendance record, according to *Koldfax*, the monthly newspaper of the Air-Conditioning and Refrigeration Institute.

PHILCO APPOINTS SCHAEFER APPLIANCE DIV. VICE PRES.

Appointment of Harold W. Schaefer as vice president of Philco Corp.'s Appliance Div. has been announced by Raymond A. Rich, vice president and general manager of the division. Schaefer was formerly vice president in charge of engineering.

ADMIRAL NAMES DESIGN FIRM

Trombley Pisani & Trombly, Birm-

ingham, Mich., was appointed industrial design consultants to Admiral Corp., Chicago, according to J. R. Oberly, vice president — appliance division. The firm will participate in the design of Admiral's appliance lines.

6-MO. HOME LAUNDRY SALES UP 6% OVER 1955 PERIOD

Factory sales of home laundry appliances for the first six months of 1956 were the greatest of any first six months in the history of the industry, Guenther Baumgart, executive director, American Home Laundry Manufacturers' Assn., has announced. Total sales of washers, dryers and ironers amounted to 2,818,174 units, an increase of 6% over first half of 1955.

175 BOOK SPACE FOR 5TH CANADIAN PACKAGING SHOW

Foreign interest in the Canadian National Packaging Exposition is on an up-swing, according to officials of Packaging Assn. of Canada. Twenty exhibitors from the U. S. and exhibitors from Great Britain and Germany are among the 175 who have booked space for the 5th exposition, to be held in the Automotive Building, Canadian National Exhibition grounds, Toronto, Nov. 6-8.

ADMIRAL APPOINTS MELTON

B. H. Melton has been appointed to the newly-created position of national sales manager — appliance division, Admiral Corp., Chicago, announced J. R. Oberly, division vice president.




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chip,
or peel
the
Ty-Bond
zinc
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coating**



- Stays put under stress
- Becomes a part of the metal it coats
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than ever...**

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**THESE INDUSTRY LEADERS KNOW FROM
EXPERIENCE THAT D-ENAMELING TRANSFORMS
SCRAP LOSS INTO PROFIT DOLLARS**

AIRLINES

**HOME LAUNDRY APPLIANCE
MANUFACTURERS**

JOB ENAMELING PLANTS

RANGE MANUFACTURERS

REFRIGERATOR MANUFACTURERS

SANITARY WARE MANUFACTURERS

SIGN MANUFACTURERS

SPACE HEATER MANUFACTURERS

WATER HEATER MANUFACTURERS

**D-Enameling is a patented process.*

New Process D-Enameling Corp.

Highland and New Haven Avenues • Aurora, Illinois



DR. ANDERSON TO CARRIER

The appointment of Dr. Philip E. Anderson as director of development in absorption refrigeration has been announced by Walter A. Grant, vice president of Carrier Corp.'s central Research and Development Div. Dr. Anderson was formerly director of advanced engineering for Servel, Inc., Evansville, Ind.

SCOTT-ATWATER APPOINTS WOODWARD AND SMITH

Scott-Atwater Mfg. Co., Minneapolis, has announced the appointments of John Woodward to assistant general manager, and Byron E. Smith to plant engineer.

ADMIRAL CONTEST FEATURES AFRICAN SAFARIS AS PRIZES

Eight safaris to Africa big game country will be awarded as grand prizes in the \$250,000 contest for distributor and branch sales personnel of Admiral Corp., Chicago, announced W. C. Johnson, sales vice president. The three-week, 18,000 mile African trips will be awarded to top performing salesmen.

DAILY CITES VAST MARKET FOR VACUUM CLEANERS

Despite record sales in recent years, vacuum cleaners are in only 30 million of the 47 million wired homes in the United States, Walter J. Daily, vice president, Lewyt Corp., reports. "The sales picture will get bigger and bigger as more and more homes are wired", Daily said. He added that saturation of vacuum cleaners today is 64.3% compared to less than 50% in 1947.

GAS INDUSTRY HAILS CONNER

The gas industry recently honored Raymond M. Conner, who retired July 31 after 41 years in the industry. At a testimonial dinner in Cleveland, Chester

S. Stackpole, managing director, American Gas Assn., and H. Leigh Whitelaw, executive vice president, Gas Appliance Manufacturers Assn., termed Conner's pioneering an essential factor in the vast expansion of gas utility operations and appliance manufacturing. Conner directed the American Gas Assn. Laboratories from the time of their establishment in 1925 until 1947.

Awards were presented to him by AGA and GAMA and also on behalf of the Pacific Coast Gas Assn., which he served before joining the national association.

KAUFHOLD IS WEBER VP

J. L. Kaufhold has been elected vice president of Weber Showcase and Fixture Co., Los Angeles, according to an announcement by the board of directors. He is general manager of the National Commercial Refrigeration Div.



SHEEHAN IS AHLMA TREASURER

Gregory M. Sheehan, manager-finance, Home Laundry Dept., General Electric Co., Louisville, Ky., has been appointed treasurer of the American Home Laundry Manufacturers' Assn., President B. J. Hank announced recently. Sheehan succeeds Parker Ericksen, who resigned.

SIX NEW MEMBERS JUMP NEMA MEMBERS TO 568

Six more electrical manufacturers have joined the National Electrical Manufacturers Assn., J. W. Corey, Assn. president, has announced. The six raised the number of member companies on NEMA's register to 568, Corey said. The six and their sectional affiliations are: Dixie Raydiant Electric Heat Corp.; Atlanta, Ga.; Rentio, Inc., Knoxville, Tenn.; and Sundial Electric Co., a division of Slant-Fin Radiator Corp., Richmond Hill, N. Y. These three are affiliated with the NEMA Electric House Heating Equipment Section. Great Northern Mfg. Corp. of Chicago is affiliated with the NEMA Laminated Products Section and its Decorative Laminates Group. A. O. Smith Corp., Electric Motor Div., Dayton, O., is affiliated with the NEMA Motor and General Section and its Fractional and Integral Horsepower Subsections.

HALF-YEAR VACUUM CLEANER SALES BREAK ALL RECORDS

Factory sales of standard-size household vacuum cleaners in the first half of 1956 broke all records for that period, according to the Vacuum Cleaner Manufacturer's Assn. Sales totaled 1,911,482 units, an increase of 19.2% over the 1,604,107 cleaners sold in the same period in 1955.

MELVIN IS SAHLIN SALES MGR.

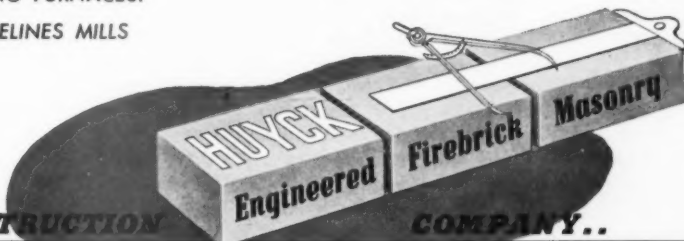
Richard H. Melvin has been appointed sales manager for Sahlin Engineering Co., Inc., Birmingham, Mich., announced Richard T. Sahlin, president. He was formerly a sales engineer.

ILLINI'S DR. HURSH DIES

Dr. Ralph Kent Hursh, Professor of Ceramic Engineering, Emeritus, at the University of Illinois, died on July 12.

HUYCK FURNISHES FIREBRICK MASONRY TO BUILD, REBUILD AND REPAIR ALL TYPES OF: ENAMELING FURNACES . . . FRIT SMELTERS . . . ALUMINUM, BRASS, LEAD SMELTERS . . . FORGE FURNACES . . . HEAT TREATING FURNACES.

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NEWS about Suppliers



LINK-BELT'S SNYDER RECEIVES 50-YEAR PIN

N. Stanley Snyder, district manager of Buffalo, N. Y. (left) receives his 50-year pin from D. E. Davidson, vice president for sales, Link-Belt Co., Chicago. Snyder is the oldest employee in length of service in the company's sales department.

ROMIG ELECTED PRESIDENT OF AMER. CHEMICAL PAINT

Gerald C. Romig has been elected president of American Chemical Paint Co., Ambler, Pa., and Leon Cherksey has been elected to the new position of chairman of the board. Romig was formerly a vice president, and Cherksey was president.

TUTTLE & KIFT APPOINT WIS. MFRS. REPRESENTATIVE

Erich G. Weissenberger, sales manager of the Special & Industrial Heating Units & Devices' division of Tuttle & Kift, Inc., Chicago, has announced the appointment of Honkamp Sales Co., 2223 N. 70th St., Milwaukee, Wis., as manufacturer's representative for Wisconsin and upper Michigan.

REPUBLIC STEEL UPS THREE

J. J. I. Jamieson has been appointed general manager of sales, Steel and Tubes Div. of Republic Steel Corp., Cleveland. Richard T. Nist has been named district sales manager of the Minneapolis office of the parent company, and John W. Davies has been appointed district sales manager of the Detroit office.

ACME STEEL PLANS PURCHASE OF NEWPORT STEEL CORP.

Acme Steel Co., Chicago, has agreed to purchase the property and net assets of Newport Steel Corp., Newport, Ky., subject to approval of Newport stockholders. Upon completion of the purchase, Newport will be operated as an Acme Steel division.

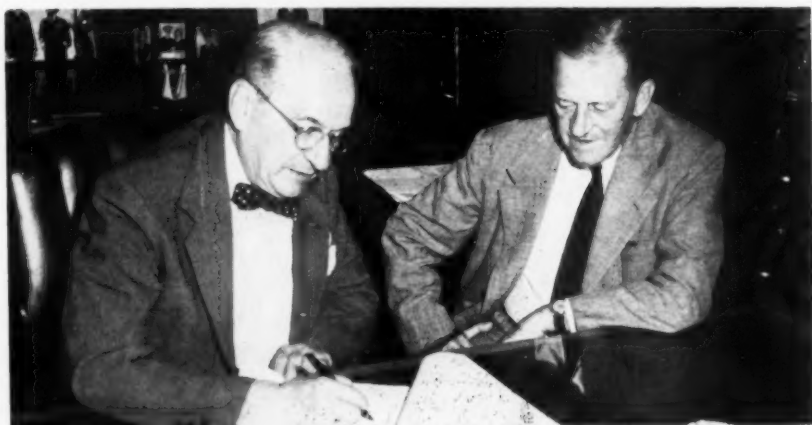
STRETMATER JOINS REYNOLDS

Forrest Stretmater has joined Reynolds Metals Co., Louisville, Ky., as chief metallurgical engineer for the sales division. He was formerly chief metallurgist for Servel, Inc., Evansville, Ind. Fred W. Boynton has been named industrial products sales manager in the Great Lakes sales region.

ROBERTSHAW-FULTON UPS RICE

Harold W. Rice has been appointed director of the West Coast research and development laboratory of Robertshaw-Fulton Controls Co., announced T. T. Arden, executive vice president for western operations. Rice succeeds H. W. Geyer, who has resigned.

RANSBURG ANNOUNCES MILLION DOLLAR EXPANSION PLAN



PRESIDENT Ransburg, left, signs contract as Carl Geupel, contractor, watches.

Plans for a million dollar building and expansion program for Ransburg Electro-Coating Corp., Indianapolis, have been announced by Harold Ransburg, vice president. Construction of the single story building will get under way before the year's end and is expected to be completed late in 1957. The

METAL & THERMIT NAMES NEW SALES EXECUTIVES

Harry W. Buchanan, III, has been named sales manager of chemicals, metals and plating products for Metal & Thermit Corp., New York announced A. J. Fisher, general sales manager. Henry Mahlstedt has been appointed product manager for plating products. George Betz is product manager for chemicals and metals, and Donald R. Meserve is product manager for coatings. Bernard W. Weber has been named manager of manufacturing. He succeeds Walton S. Smith.



BUCHANAN



TED PECK

TED PECK ELECTED CHICAGO VITREOUS VICE PRESIDENT

Theodore T. Peck has been elected vice president of Chicago Vitreous Corp., Cicero, Ill. He will continue as secretary of the corporation, a post he has held for three years.

SIEGLER PURCHASES KINNAIRE

Siegler Corp., Chicago, has entered the central air-conditioning field by the acquisition of Kinnaire, Anaheim, Calif.

80,000 sq. ft. building will house the administrative, sales and engineering offices and a plant area of 150 x 330 ft., which will house the engineering and test laboratories, manufacturing and warehouse. The back wall of the building is planned to facilitate future expansion of facilities.



PEMCO LOW-TEMPERATURE PORCELAIN ENAMEL FRIT has been successfully tested and is being used on panels for the Holiday Hotel, Reno. Pictured are J. B. Willis, left, service manager, C. P. Lohman, V. P. sales, and Dr. George H. Spencer-Strong, head of the research & development labs.

1956 ENAMELERS

New Central District Enamelers Club officers are Herb Lindegger, Westinghouse Electric at Mansfield, O., president; William Rode, Enamel Products of Cleveland, Paul Thompson, Whirlpool-Seeger, and Melvin Mullis, Newark Stove Co., 1st, 2nd and 3rd vice presidents respectively. Mike Bozsini, Ferro Corp., is secretary treasurer; and Ferro's Fred Allenbaugh is asst. secy-treasurer.



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- DUST COLLECTORS
- SPRAY BOOTHS
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UNI-WASH DUST COLLECTORS

Compact, complete recirculating Water-Type Dust Collectors for industrial processing dusts. Dirt is collected as wet sludge which may be carried away automatically. No moving parts. Extremely efficient for grinding operations. Eliminates danger of explosion from magnesium and aluminum dust. Proven in foundries. Standard Units available.

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that makes the
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National Lock decorative and functional hardware will bring outstanding user appeal to your line. You'll find National Lock offers the most modern creations in both standard and custom-built items. Our experienced stylists will work independently or in cooperation with your own designers. This service includes hardware in die cast, stampings, compression and injection molding. Write us for full information.

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NATIONAL LOCK COMPANY

Rockford, Illinois

RANSBURG *Electro-Spray* DOES IT BETTER... FOR LESS



50%

INCREASE IN PRODUCTION

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SAVINGS IN LABOR and OVERHEAD

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CUT IN PAINT COSTS, with improved, more uniform, and higher quality finish.



The job—flat sheet steel, 11" x 19"—enamel coated to withstand a 90 bend with sharp radius. Full coat one side; mist coat other.

WITH RANSBURG ELECTRO-SPRAY : BY FORMER HAND SPRAY :

Output, 375 panels per hour with 3 men
per panel
Labor and overhead06
Paint & lease cost017
TOTAL COST077

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per panel
Labor and overhead12
Paint cost044
TOTAL COST164

Want to know what Ransburg Electro-Spray can do for you in YOUR finishing department? Write for our new No. 2 Process brochure. It tells the WHAT & HOW of electrostatic spray painting, and with numerous production-line examples, shows how other manufacturers are cutting finishing costs... increasing production, and improving the quality of their work with Ransburg equipment. Too, we have available now a new movie, "The Big Attraction," a 27-minute sound and color film on electrostatic spray painting.

Ransburg

ELECTRO-COATING CORP.

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MALM

SEARS AND UNITED WALLPAPER CONSOLIDATE FACTORY GROUPS

Consolidation of six paint and varnish factories, three wallpaper factories, and a Central Research Laboratory under United Wallpaper, Inc., Chicago, was accomplished in the recent action whereby Sears acquired 91.7% of the reclassified common stock of United Wallpaper, Inc., Chicago. The factory groups now under United Wallpaper, Inc., include Benjamin Franklin Paint & Varnish Co.; Carolina Paint & Varnish Works; Central Paint Research Laboratories; DeSoto Paint & Varnish Co.; Illinois Paint Works; Pacific Paint & Varnish Co.; and the John A. Steen Varnish Co. Also included are Inland Wallpaper Co.; United Wallpaper division, Joliet, Ill., and United Wallpaper Division, Kansas City. In the stock exchange action which resulted in the consolidation, the new board of directors elected R. E. Brooker chairman of the board; S. U. Greenberg president and chief executive officer; B. A. Malm vice president—operations; H. E. Butts vice president—finance; G. A. Nichols vice president—research, and B. W. Bours, Jr., secretary. Other members of the United Staff include J. R. Dove, sales coordinator; W. H. Lynch, engineering coordinator; W. A. Ninnis, director of personnel and industrial relations. F. B. Heitkamp is president of United Wallpaper Sales Division.

SMITH, UNION STEEL TREASURER AND DIRECTOR, RETIRES

C. Reginald Smith retired on July 1 as treasurer and a director of Union Steel Products Co.

125 RESERVE SPACE FOR DEC. MERCHANDISING SHOW

A total of 125 exhibitors have reserved space for the 1956 trade show of National Automatic Merchandising Assn., to be held in The Conrad Hilton, Chicago, on December 2-5, according to Herb A. Geiger, Geiger Automatic Sales Co., Milwaukee, chairman of the

Exhibit Sales Committee. Geiger points out that this trade show has grown since its first exhibit in 1947 until it now covers all major phases of automatic merchandising.

DeVILBISS LISTS FALL DATES FOR SPRAY PAINTING SCHOOL

The fall schedule of instruction for the DeVilbiss Co. school of spray finishing has been announced. The dates are September 10, October 8, November 5 and December 10.

BRENTON ELECTED PEMCO V.P.

William V. Brenton has been elected a vice president of Pemco Corp., Baltimore, Md., according to Richard H. Turk, chairman and president. Brenton has been serving as a district sales manager in the Mid-west.

ANNUAL PEI MEETING

The Porcelain Enamel Institute's annual meeting will be held at The Broadmoor Hotel in Colorado Springs, Colorado, on September 18-21.



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The next time the KLEM man calls at your plant take advantage of his specialized experience and training in metal surface cleaning and preparation. If you have a problem he may be of help to you on the spot, if not he'll use the KLEM-PLAN to present the facts to our lab technicians who will find a quick answer for you.

KLEM

CHEMICALS
INC.

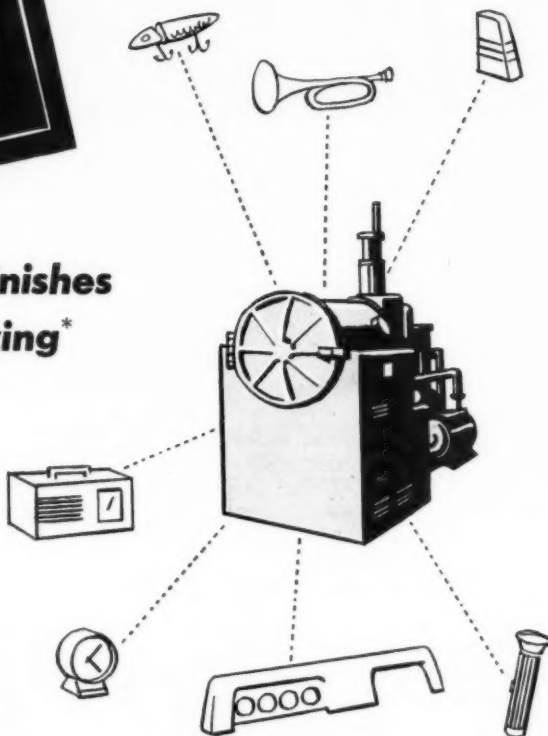
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**A complete line of finishes
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- * spray or dip



Platers have long been familiar with the Guardsman line of clear and pigmented finishes for chrome and stainless steel. Now we have developed Vacu-Gard a logical companion line of finest quality finishes for vacuum metalizing.



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GRAND RAPIDS VARNISH CORPORATION

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Makers of the famous [®]Guardsman Finish and [®]Guardsman Cleaning Polish

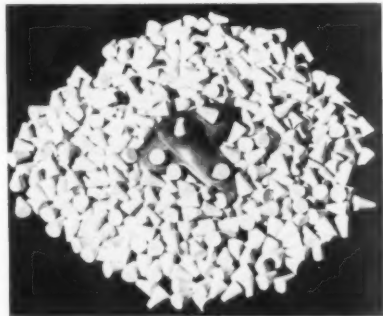
***THE BETTER THE FINISH THE BETTER THE BUY**

New Supplies and Equipment

G-18. Barrel finishing media

New

A new barrel finishing media — conical ceramic shapes — has been announced which makes it



possible to barrel finish intricate parts that previously could not be finished in this manner because of lodging problems. The cone-shaped media minimizes the dangers of contamination because the ceramic material is fused under high pressure to eliminate voids and resist deteriorating effects of acids. The cones are $\frac{1}{2}$ " high, $\frac{3}{8}$ " through the base and $\frac{7}{32}$ " across the top.

G-17. Electronic conductivity controller

New

A new electronic instrument for controlling the conductivity of solutions has been developed. The manufacturer believes the new device fills the need in industry for a low cost solution conductivity controller where recording is not required. The instru-

ment, it was stated, will find application in the water treatment, metal processing industries, etc., where it can be employed in controlling water purity, presence of specific chemicals in solutions, process baths, etc.

G-22. Anti-vibration fastener

New

The "Well-Nut" is a tough rubber bushing in one end of which is bonded a threaded hex brass nut, the opposite end being provided with a flange. These nuts are said to give an airtight and watertight seal and will hold where panels are too thin to be tapped to take a screw. They are suitable for making attachments to porcelain, thin plastics, sheet metal or any composition material for which normal methods are unsuitable. They will not damage or chip porcelain or other similar materials.

G-20. Radiant heating units

New

A wide range of application is the principal advantage offered by two new types of radiant heating equipment. The radiant heating components include quartz lamp oven sections and radiant rod oven sections. The new quartz lamp equipment was developed to accommodate an entirely new source of radiant energy — the T-3 quartz lamp — which makes possible product temperatures in excess of 1000°F. The quartz lamps are recom-

mended for many processes, including drying, curing, degreasing, baking and preheating and especially for high temperature, short cycle applications where instantaneous response is required.

G-21. Thickness gage

New

A hand-held thickness gage, which operates on a magnetic principle and requires no power, has been developed. The gage is designed

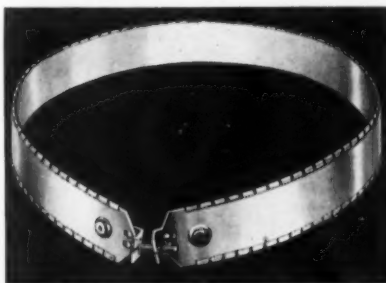


for quick, accurate, non-destructive measurement of the thickness of non-magnetic materials bonded to smooth iron or steel and the thickness of non-magnetic materials which can be placed over a magnetic reference plate. Typical materials which can be measured are paint coatings, platings, enamels and sheet materials such as plastics.

G-19. Band-type electric heating element

New

A band-type electric heating element is being introduced. It is designed to apply heat directly



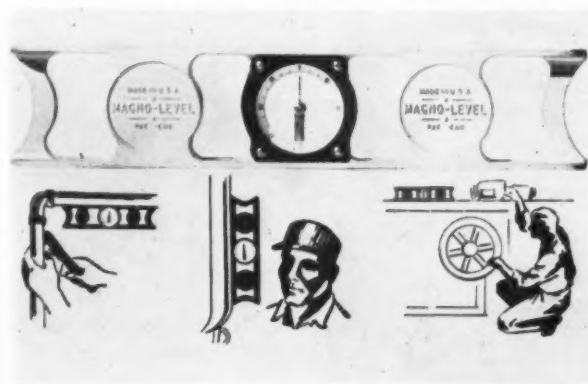
to all surfaces where heat is required and is adaptable to almost any type mounting. It is flexible and is supplied to the user flat so he can shape it to meet his requirements. Especially applicable to hot water heaters, it has application in other fields where heat and flexibility are required.

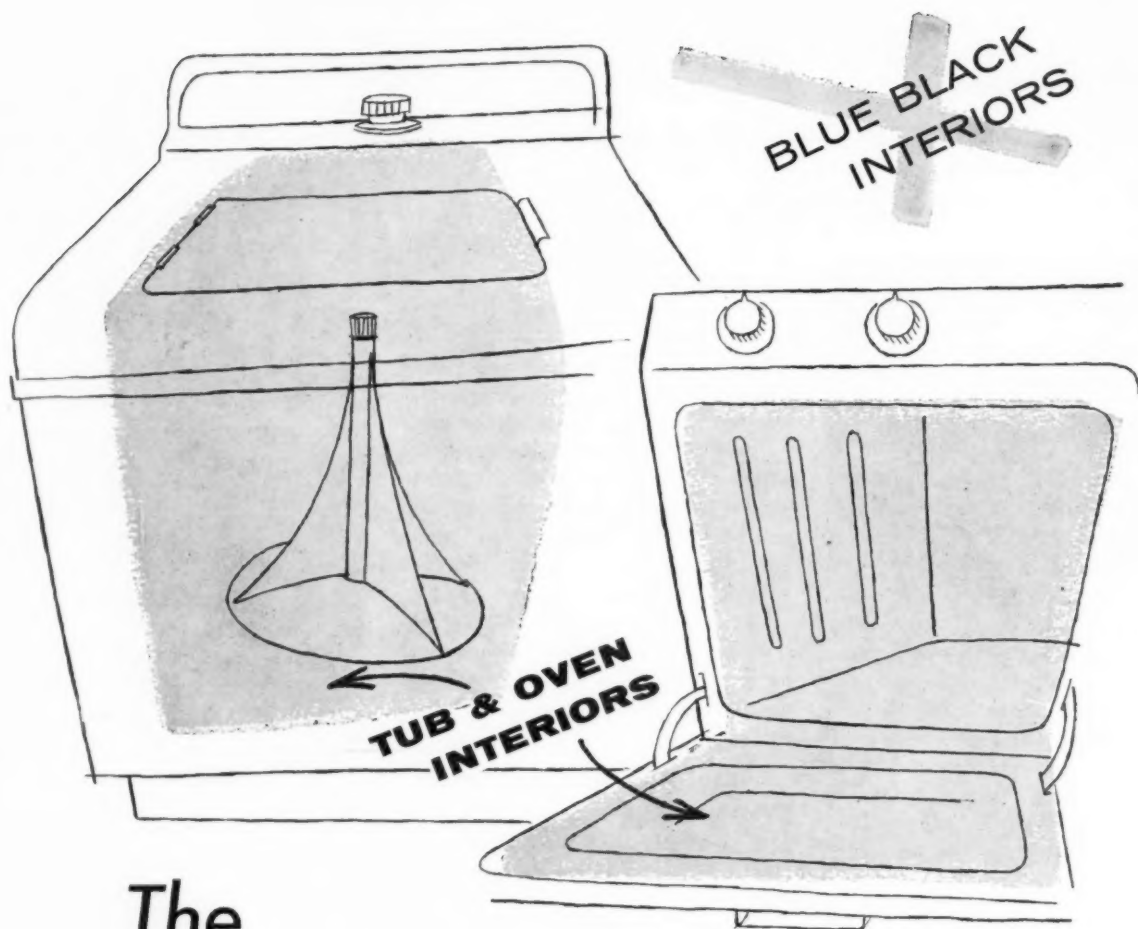
G-16. Level with built-in permanent magnets

New

A new level with built-in, powerful, permanent magnets that holds level on work without use

of hands is announced. The new device is designed for use by sheet metal workers, inspectors, welders, engineers, etc. It is said to hold securely on ferrous metals at any angle on either flat or curved surfaces. The large plastic dial gives accurate reading at a glance indicating angles from any angle. Made of aluminum, the level weighs only 10 oz. and measures $\frac{3}{4}$ " x $1\frac{7}{8}$ " x 9".





The **NEW GRAY** is better...

**Superior alkali resistance
+ workability + appearance**
are the principal advantages of the new gray
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Users of OPAX as the mill addition opacifier
are obtaining excellent results. Some report that
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Industrial Literature

99. HEATING ELEMENTS

Heating elements made of aluminized steel can operate at 1030°F., plus temperature, thus providing more BTU output from the same size unit or the same BTU output from a smaller size unit. Aluminized steel can save material by permitting reduction of the size of the gas-fired heater.

100. PAINT APPLICATIONS

A new catalog describes a complete line of finishing systems for electrostatic coating, spray painting, flow coating or dip coating.

101. RADIANT OVENS

A 20-page book discusses radiant ovens and their unlimited applications. This radiant equipment includes infrared lamp, quartz lamp or radiant rod for heating, degreasing, baking and drying operations.

102. NiCr ALLOYS

This booklet discusses nickel-chromium alloy, which retains its strength under sustained high temperatures. Equipment life is said to be longer when made of this alloy. One company used nickel-chromium alloy for hooks and realized a saving in spoiled ware and lost furnace time.

103. EMBOSSED ALUMINUM

A pamphlet discusses embossed aluminum finishes which are applicable for appliance parts and trim, table tops, etc. This finish is part of the aluminum and can't wear off, crack or chip, according to the manufacturer.

104. HOT SPRAY HEATER CONTROLS

You can dial any temperature in a 90° to 170° range by external control with a viscomatic attachment for hot spray heaters. This attachment is explosion-proof and can be factory installed with the required hot spray heater.

105. PERFORATED DESIGNS

A 128-page general catalog of perforated materials contains up-to-date information of especial interest to stylists, designers, architects and buyers. The catalog illustrates hundreds of different standard patterns at actual size and provides information regarding hole size, centers and percent of open area.

106. DETAILS ON SCREWS

This list is on machine screws, tapping screws, thread-cutting screws, sems screws, pipe plugs, stove bolts, etc., made of stainless steel, bronze, brass, copper, silicon bronze, ambrac, monel or aluminum.

107. ELECTROSTATIC SPRAYING

A 30-minute, 16 mm. sound and color movie on electrostatic spraying features various production line applications. Case histories cover small and large manufacturers of refrigerators, home laundry appliances, toys, lighting fixtures. This movie is available for showing anywhere.

108. SPRAY BOOTHS DESIGNING

A 16-page color bulletin on spray booths offers suggestions, tips and ideas on the latest ways to achieve better finishes, faster production and smooth handling of metal products.

109. ANODIZED ALUMINUM

A booklet describes a new aluminum alloy which is particularly suitable for applications requiring an anodized finish — agitators and tubs, ice cube trays, toasters, irons, portable mixers, refrigerator trim, etc.

110. CRITICAL STAMPINGS

This brochure deals with critical stampings, such as stampings for a washing machine mixing valve.

111. DIE SUPPLIERS FACILITIES

Free literature is available on a die manufacturer's facilities and products. Included are descriptions of a new plant and engineering services.

112. STAINLESS SINK FRAMES

A catalog describes a line of stainless steel sink frames. These frames are watertight, sanitary and, according to the manufacturer, easy to install. They feature an all-around seal and invisible top weld.

113. SHIPMENT TEST EQUIPMENT

This brochure describes a complete line of incline impact testers and drop testers for safe testing of packaged products.

114. COLORED FREEZER SHELVES

Steel evaporators and freezer shelves are available in almost every color. Electro zinc plating, plus electrostatically deaired and baked coats of a new epoxy produce a chip-proof and scratch-proof finish on these products. They are also chemical and acid-resistant.

115. ELECTROSTATIC SPRAYING

A highly illustrated 15-page booklet discusses an electrostatic spray painting process. On-the-line examples show actual installations in various appliance and metal products manufacturing plants. Included are diagrams showing the basic process of the spray method.

116. HOW TO BARREL FINISH

A 52-page, two color catalog illustrates and describes a line of barrel finishing equipment. Included in the book are an explanation of barrel finishing and types and uses of medias and finishing compounds.

117. SELECTING FRACTIONAL MOTORS

A fractional hp motor selector chart answers basic questions on small motors. Characteristics and performance ranges of all fhp motor types are charted in detail. Speed-torque curves for basic motor types are illustrated as well as other motor data.

FINISH

York Street at Park Avenue
Elmhurst, Illinois

Please forward to me at once information on the new supplies and equipment and new industrial literature as enumerated below:

No. _____ No. _____ No. _____ No. _____

No. _____ No. _____ No. _____ No. _____

Name _____ Title _____

Company _____

Company Address _____

City _____ Zone _____ State _____

TECHNIC

SOLUBLE SOLUBLE
GOLD RHODIUM

Technic solutions, like
Technic advisory service, set
the standards for precious
metal electroplating.

TECHNIC, INC.

39 SNOW ST., PROVIDENCE, R. I.
JACKSON 1-4200
Chicago Office: 7001 North Clark St.



NEW LITERATURE CONTINUED — REPLY COUPON ON PAGE 103

118. CENTRIFUGAL PUMPS

A catalog sheet describes new centrifugal pumps featuring a two-piece seal which can be installed or replaced by any shop workman and requires no further adjustments. It is constructed entirely of extra low carbon stainless steel. A chart indicates the capacities and flow-rates of the centrifugal pumps now in production.

119. OVERHEAD HANDLING SYSTEMS

This illustrated booklet covers the principal components of overhead materials handling systems. Track design and advantages of supporting it flexibly

are described. Included are formulas and figures for comparing various track sections.

120. SAFETY VALVES

Safety shut-off, manual reset valves are used in gas supply lines leading to boilers, furnaces, ovens and other heating equipment to shut off the fuel automatically and instantly upon failure of power. The valves are designed to control the flow of manufactured, natural and L-P gases in a maximum ambient of 104°F. They can also be used to handle various grades of fuel oil and non-corrosive liquids and gases.

121. ABRASIVE SHORTCUTS

A 10-page booklet illustrates how several appliance manufacturers are cutting costs and improving finishes with coated abrasives. The booklet makes case history presentations of several abrasive operations, including pre-finishing, weld grinding and blending, removing imperfections, and finishing and polishing.

122. AUTOMATIC PLATING

A bulletin on automatic plating and processing machines illustrates and describes variable rack spacing. Racks can be up to seven feet wide with unlimited depth.

123. CONVEYOR SAFEGUARDS

A four page folder on "Ten Rules for Safety in Conveyor Operation" deals primarily with safety rules that should be followed when installing a conveyor. Several different types of conveyors are covered in the report such as overhead conveyors, belt conveyors, slat conveyors, etc.

124. DECORATIVE GLASS

This brochure illustrates the application of decorative glass and discusses four major points designers should know when considering decorative glass for product restyling.

125. PROCESS HEATING

A 16-page illustrated catalog explains the latest techniques in process heating, including a successful method of combining radiation with convection. The booklet covers applications of booster ovens and complete systems, including information on panel segments, wiring channels and conveyors.

126. ALUMINUM ARTICLES

A compact monthly publication covering aluminum news is being made available to the metalworking industry. It is a 32-36 page digest containing 50 to 60 reviews of articles relating to aluminum that have been published in the technical press the preceding 30-60 days. It also carries a news summary of related current events, statistics on the aluminum industry and patent listings.

127. EXTRUSION ALLOYS

A bulletin on extrusions also contains data covering physical properties of various aluminum alloys. The basic extrusion types are discussed, and the manufacturers' facilities are briefly described.

SPECIALS
tailored
TO YOUR DESIGN

STUD CLIPS
MOULDING CLIPS
SCREW FASTENERS
THREADED PARTS
SPRINGS & STAMPINGS

A SUBSIDIARY OF
BARIUM
STEEL CORPORATION

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The CUYAHOGA SPRING Co.
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"How-To" DECAL Nameplates by **MEYERCORD**



Each year Meyercord produces millions of "How-To" Decals... in hundreds of designs. These Decal Nameplates, applied to all manner of machines and equipment tell users "How-To" use high tension equipment, "How-To" use safety masks, "How-To" start everything from lawnmowers to diesels, "How-To" operate farm equipment, "How-To" use factory lift trucks and conveyors. Make certain your product is operated correctly for maximum service and satisfaction... show them "How-To-Do-It" with Meyercord Decal Nameplates.

Ask for the Meyercord full color, informative "Mark It" Manual... just drop us a line on your company letterhead.

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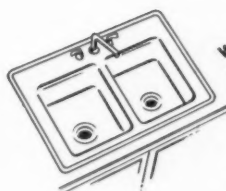
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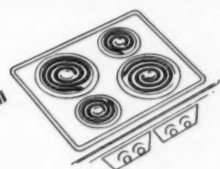
VAN SEAL

**FRAMES for
BUILT-IN SINKS
and RANGES**

PATENT NOS. 2,440,741, 2,704,370



Watertight
Sanitary
Easy to install



Made by specialists in the
designing and manufacture
of clamp-down frames

YOU CAN DEPEND ON THESE FEATURES

PERFECT BENDS— EVERY TIME

Each corner radius is exact, assuring a tailor-made fit.

LEGS ARE ALWAYS VERTICAL—STRAIGHT

The vertical leg of every VanSeal Frame is at a perfect 90° angle to the top flange to assure a tightly-sealed installation.

EXACT UNIFORMITY

VanSeal Frames of the same size are consistently alike in their measurements.

INVISIBLE WELDS

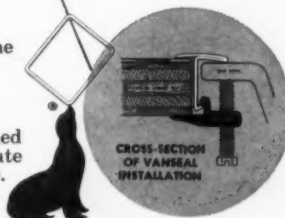
Welded so perfectly—finished so smoothly—you can't locate the weld on the top surface.

Vance has pioneered in the manufacture of stainless steel clamp-down frames and has already produced more than a million!

When you use VanSeal Frames on your built-in sinks and ranges, you can be sure of a frame that will fit perfectly! Installations can be made with confidence.

VanSeal Frames assure easy, sanitary, self-aligning installation and added beauty for your counter-top and built-in range units. Benefit from Vance Industries' long experience in making frames for all types of built-in units.

...Specify VanSeal and be sure!



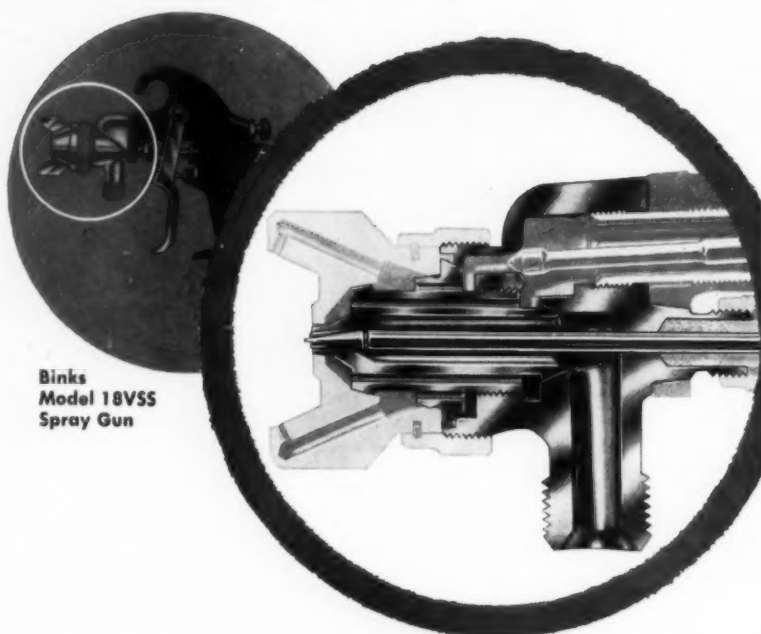
*Call your VanSeal Distributor

or write for catalog to Dept. F-9

VANCE INDUSTRIES, INC.
2108 Jackson Avenue • Evanston, Illinois

Orders Shipped Same Day Received

What's New in spray guns for ceramics



Binks
Model 18VSS
Spray Gun

Stainless steel parts stop gun corrosion and fluid contamination

Several manual and automatic spray guns in Binks line are now available with special stainless steel gun heads, nozzles, fluid needles and other parts that come in contact with the fluid.

For the application of porcelain enamels, slip and other abrasive materials, the new guns are supplied with tungsten carbide reinforcements on the needle valve and in the nozzle. This combination of metals eliminates rejects caused by metallic contamination of the fluid and lengthens gun life by preventing

corrosion and protecting precision parts against abrasion.

Binks Model 18VSS is a precision built, heavy duty manual spray gun with both stainless steel and tungsten carbide parts.

Binks Model 18RVSS is a mechanically operated automatic spray gun with the same corrosion- and contamination-resistant features.

For complete information on Binks stainless steel spray guns, call your nearest Binks branch office or write direct to the address below.

Ask about our spray painting school
Open to all...NO TUITION...covers all phases

675



SPRAY
BOOTHS



AIR
COMPRESSORS



FLUID
TANKS

Binks Manufacturing Company

3122-40 West Carroll Ave., Chicago 12, Illinois

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

WESTINGHOUSE 2ND QUARTER APPLIANCE SALES SET RECORD

Sales of Westinghouse appliances in the second quarter were highest in history, Vice President John W. Craig, general manager of the Electric Appliance Divisions, reported. Sales were 36.3% over the like period of 1955. Craig said the company expects overall high appliance activity to continue.

AMANA SETS SALES RECORD IN FIRST SIX MONTHS

A new sales record was established by Amana Refrigeration, Inc., Amana, Iowa, in the first six months of 1956. Sales were 25% higher than in the same period last year and the highest in its history for any six-month period.

BULL SEES BRIGHT FUTURE FOR AUTOMATIC DRYERS

More than 2,250,000 automatic gas and electric clothes dryers will be sold within the next 12 months, according to Harold Bull, director of distribution, Norge Div., Borg-Warner Corp., Chicago. Bull also predicted that 10,300,000 dryers will be sold by 1960, when dryers will reach 29.9 saturation mark.

NAT'L. BUREAU OF STANDARDS TO BE RELOCATED IN MD.

A tract of land near Gaithersburg, Md., has been selected for relocation of the Washington laboratories of the National Bureau of Standards. The move will permit the Bureau to plan new buildings to replace present research facilities, which have become inadequate for current needs.

G.E. 6-MO. SALES UP 17%

The General Electric Co., Schenectady, N. Y., achieved record sales of \$1,958,974,000 during the first six months of 1956, President Ralph J. Cordiner has announced. This represented a 17% increase over sales for the first half of 1955.

HERSHEY TO KAISER ALUMINUM

Franklin Q. Hershey has joined Kaiser Aluminum & Chemical Co.'s Oakland, Calif., product development department to manage the new section of industrial design.

BRYANT ELECTRIC UPS EAGLES

James R. Eagles has been named assistant to the division manager of the Bryant Electric Co., subsidiary of Westinghouse Electric Corp., announced Division Manager L. N. Goodell.

satisfactory Enameling Results with NON-PREMIUM STEEL



YES! IT'S BEING DONE RIGHT NOW . . .

with specially developed Ing-Rich Frits which are providing satisfactory enameling results at 1250 to 1300 degrees at conventional chain speeds.

ING-RICH . . . DOES IT AGAIN

If you face the problem of the use of non-premium steel, it could prove very helpful to at least listen to our factual story of success which came as a result of Ing-Rich "Know-How" . . . Ing-Rich ceramic engineers working with our own enameling plant technicians.

INGRAM-RICHARDSON, INC.

OFFICES, LABORATORY AND PLANT, FRANKFORT, IND.





Our
challenge
stands



- anything that can
be made of steel sheets can be made of

Believe it or not, this galvanized recessed ceiling light reflector housing was made by spinning. "Impossible," you say? "Can't be done with ordinary galvanized steel?"

You are right! It *isn't* made of ordinary galvanized steel.

It's made of Wheeling **sofTITE**, the tightest-coated galvanized sheet yet produced. So tight it won't chip, crack, flake or peel no matter how severely it is formed. It even takes *spinning* in its stride. In fact, *anything* that can be made of steel sheets can be made of Wheeling **sofTITE**.

That's **sofTITE**...made by the same company that developed Cop-R-Loy, the original copper-bearing steel pipe...and DUCTILLITE, the original cold reduced tin plate. Now **sofTITE**, the ultimate in ductile, tight-coated galvanized steel sheets...a product of Wheeling Steel Corporation, Wheeling, West Virginia.

IT'S WHEELING STEEL

WHEELING
sofTITE
Galvanized Sheets



District Offices — Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Houston, New York, Philadelphia, St. Louis, San Francisco

safe transit

September, 1956

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DANA CHASE PUBLICATIONS
York Street at Park Avenue
Elmhurst, Illinois

editorial voice of the national safe transit program

devoted to improving packaging methods and shipping and materials handling methods for the appliance and metal products manufacturing industries. This section contains plant experience information and industry advances for the use of all executives and plant men interested in improving packaging and shipping methods and in loss prevention. The section contains complete information on the national safe transit pre-shipment testing program for packaged finished products and detailed reports of divisions and sub-committees of the National Safe Transit Committee.

published monthly as special section of finish — the magazine of appliance and metal products manufacturing

SAFE TRANSIT NEWS

NATIONAL SAFE TRANSIT COMMITTEE

Associations Building, 1145 - 19th St., N. W., Washington 6, D. C.



NST Regional Meeting in Milwaukee - Mr. P. W. Bush, Chairman of NST's Technical Division, recently addressed a Milwaukee Regional NST meeting, attended by representatives of the area's Association of Commerce as well as representatives of leading industry, container, and carrier groups. The 17-minute colored NST film was shown, followed by a general discussion of the NST Program and its aims. Mr. A. W. Gaulke, Regional Chairman of the Milwaukee area, arranged for the meeting.

- - - - -

Carolina Freight Carrier Corp. Wins National Award - The second place trophy for its outstanding leadership and achievement in reducing the volume of freight loss and damage was recently presented to Carolina Freight Carrier Corp., Cherryville, North Carolina. The company was one of nine trucking firms throughout the country that received awards in a national "Claim Prevention Contest" which the American Trucking Associations, Inc. sponsors each year. Mr. J. L. Boies, Vice President, Claims, of this firm, and an officer in several national and regional carrier groups, has been a strong supporter of the National Safe Transit Program. Mr. Boies writes, "...I thought you might be interested (in the fact that)...we are still re-emphasizing the importance of Safe Transit to our employees and also to shipper and carrier groups encountered at our national, regional, and local meetings". It is also significant to note that an average of 99.5% claim free traffic was achieved by this company in 1955.

- - - - -

Trucking Firm Features NST Label - The Freight Claim Department of Miller Motor Express, Inc., Charlotte, North Carolina, has distributed to their workers on the job a bulletin featuring the NST label. The bulletin reminds workers that manufacturers using the label have tested their packaged products prior to shipment, and the manufacturer knows that they are protected against all normal transit conditions. The bulletin urges workers to make the label a reminder to give all shipments careful handling. A copy of this bulletin may be obtained by writing to the Committee's Washington office.

- - - - -



100th McDonald ANNIVERSARY

This A.Y. McDonald Mfg. Co. water system is properly protected for safe shipment through the use of a Watkins Container built by Kieckhefer Box & Lumber Co.

The Finest Products Go In Watkins Containers

They are preferred because of:

1. Low Cost
2. Stacking Strength
3. 75% Assembled—Upon Receipt
4. Ease of Assembly
5. Easy Handling
6. Minimum Storage Space
7. Protection from Dust and Dirt

THESE COMPANIES BUILD WATKINS CONTAINERS



Custom Protection . . .

THE **WATKINS CONTAINER** MANUFACTURERS

COZIER CONTAINER CORP.
446 East 131st Street, Cleveland, Ohio

CRATE-RITE MFG. CO.
1015 Orient Street, Oakland 7, California

DURA-CRATES, INC.
940 E. Michigan St., Indianapolis, Ind.

HEMB & MARTIN MFG. CO.
P.O. Box 108, Murfreesboro, Tennessee

ILLINOIS BOX & CRATE CO.
811 Center Street, Plainfield, Illinois

KIECKHEFER BOX & LUMBER CO.
1711 W. Canal St., Milwaukee 3, Wis.

LANE CONTAINER CORP.
10212 Denton Road, Dallas, Texas

LEWIS & CLARK CONTAINER CO.
243 Singer Street, Lewisburg, Ohio

LOVE MFG., INC.
P.O. Box 546, Wichita, Kansas

UTILITY CRATE CORPORATION
9019 Imperial St., Los Angeles 21, Calif.



THE BOX THAT SAYS "BUY ME"



Just when the customer is in a buying mood, the product container is often the only salesman. Does your box close the sale by saying "Buy me"? An attractive, informative Gaylord box catches the prospect's eye...gives him convincing reasons why he should invest his money in your product.

Employ handsome Gaylord containers as your full-time salesmen—contact your nearby Gaylord office.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION • ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION

Here's why *Lawson* uses International shipping containers

Easy to handle... provides safe transit!

- Carton is designed for fast, easy assembly—all-fibre construction cuts packing time 20%.
- Safer... no nails, no bolts—chances of personal injury cut to minimum.
- Special tube and cap design enables lift truck to handle easily.
- Interlocking flange cap provides grip for easy manual handling, necessary for large containers.
- Container can be opened without damage to contents, reclosed for further shipment.
- Dustproof construction assures factory-fresh arrival.
- Large, clean surfaces allow product identification and advertising.

If you have a problem in container design, write us for full details of our custom design service.



Note all-corrugated fibre skid for easier, faster assembly.



Lift truck inserts the lifting flange under one side of cap, pulls up. Strong construction enables sure, fast lifting, close stacking without usual jostling.



International Paper company
CONTAINER DIVISION

220 East 42nd Street, New York 17, N. Y.



Milwaukee group develops NST program

will sparkplug activities of manufacturers in safe transit program and work to develop greater participation by regional manufacturers

"WE HAVE formed what we believe to be an excellent nucleus for the National Safe Transit program in this area", A. W. Gaulke of the Vanant Co., Inc. has announced. "Each of the individuals participating in our regional group have been well established in their respective companies and many of them have years of experience in packaging and shipping problems."

Gaulke made the announcement while outlining the proposed activities and purpose of the regional group which he heads as chairman. In the photo above,

Paul Bush, National Safe Transit Planning Chairman approves a new drop tester which was invented and built by the Vanant Co. Bush was in Milwaukee to address the first meeting of the Milwaukee area group. With him in the above photo are L. G. Freedy, Regional Technical Planning Chairman, and A. W. Gaulke.

The Milwaukee group will be charged with engendering action by manufacturers in their area to participate in the safe transit program, as well as provide a public service in publicizing the mean-

ing of the "National Safe Transit Label" and the resulting values. Plans now call for an "open house" to be held in the immediate future, where test procedures will be explained and carried out.

Others besides Gaulke and Freedy who will staff the Milwaukee organization include Darrell M. Martin, a paper chemist at Cornell Paperboard Products Co., Milwaukee. His duties will include technical service, quality control and new product development. A member of TAPPI, Jute Research Group Technical

to Page ST-7 →



If you pack or handle
heavy loads...
you need this booklet



Write for your
copy today

Wirebound
BOXES AND CRATES

BOX MANUFACTURERS ASSOCIATION

Room 1154 • 327 South La Salle Street • Chicago 4, Illinois

REGIONAL NST CONTINUED

Committee and the Fibre Box Assn. Technical Committee, he holds a doctor of philosophy from Lawrence College, the Institute of Paper Chemistry.

D. D. Kneppreth is a packaging engineer for the Menasha (Wis.) Woodenware Co. He was a container officer in Naval supply during World War II and has vast experience in all phases of packaging and package design. Thelma Hansen will serve as secretary of the local group. Paul Meilleur's experience includes eleven years of work in packaging, including several years as technologist with the Container Laboratory, Inc.; assistant chief of the container testing laboratory of the United States Quartermaster of the Food and Container Institute; as a consultant in packaging and materials handling, and is currently with the Allen Bradley Co., Milwaukee, as a staff specialist in packaging and materials handling.

This is the present named staff. Two other men, representing traffic and transportation industries are now negotiating for participation as a member of the Milwaukee staff.

NST MEMBERS TOTAL 237

The following companies were recently certified under the National Safe Transit Program, bringing the total of members up to 237: The Hobart Mfg. Co., Louisville, Ky., home dishwashers; H. C. Little Burner Co., Inc., San Rafael, Calif., oil and gas fired heating equipment; and Allis-Chalmers Mfg. Co., Gadsden, Ala., transformers.

GAMA ELECTS NEW MEMBERS

Eight companies have been elected to membership in the Gas Appliance Manufacturers Assn., announced Harold Massey, managing director. They are All American Fabricators, Los Angeles; the Barnes Heating Equipment Co., Inc., Los Angeles; Central D. Mfg. Co., Culver City, Calif.; Chilton Co.; Lynchburg (Va.) Foundry Co.; Steamway Products, Inc., Cleveland; D. Talarico Reg'd, Montreal, Quebec; and Western Gas Engineering & Equipment, Ltd., Vancouver, British Columbia.

ROBERTSHAW DIV. RECEIVES PENNSYLVANIA SAFETY AWARD

Robertshaw Thermostat Division of Robertshaw-Fulton Controls Co. has received the top safety award of the Pennsylvania Manufacturers' Assn. for more than a million man-hours of work without a disabling injury.

finish SEPTEMBER • 1956

If..

Shipping containers are your problem—

Use our



Package design laboratory—our

Engineers will welcome your

Requests for



Samples of containers designed

To ship your product safely.

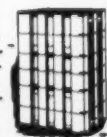
Remember—



Our laboratory is available at

No cost or obligation—we are

Glad to be of service to you.



Wirebound Boxes and Crates • Wooden Boxes and Crates
Corrugated Fibre Boxes • Beverage Cases • Starch Trays • Pallets

RATHBORNE, HAIR and RIDGWAY BOX CO.

1440 WEST 21st PLACE, CHICAGO 8, ILLINOIS

ST-7

GAS WATER HEATERS

SET 6-MONTH RECORD

Shipments of automatic gas water heaters during the first half of 1956 totaled 1,461,500 units, the highest figure ever attained in a six-month period, according to Edward R. Martin, director of marketing and statistics, Gas Appliance Manufacturers Assn. This figure is 4.1% above the shipments in the first half of 1955. Shipments of 358,500 gas-fired furnaces during the half-year were 3.9% over 1955. Gas range shipments for the same period were down 10.8% from 1955.

HARVEY ALUMINUM TO BUILD ALUMINUM REDUCTION PLANT

Harvey Aluminum, Torrance, Calif., announced that all arrangements have been finalized for construction of a 54,000 ton aluminum reduction plant at The Dalles, Oregon. The plant is scheduled for completion late in 1957.

KELVINATOR SALES ARE HIGH FOR SIXTEENTH MONTH

For 16 months out of the past 17, Kelvinator major appliance billings through June have exceeded monthly totals for the same period of the previ-

ous year, Homer L. Travis, vice president in charge of sales, Kelvinator Div., American Motors Corp., Detroit, announced. Travis said June quarter figures reflected a continuing upward trend in sales.

SORBY NAMED CHAIRMAN OF LPGA APPLIANCE SECTION

E. Carl Sorby, vice president, Geo. D. Roper Corp., Rockford, Ill., has been named chairman of LPGA's Appliance Manufacturer's Section.

KENITZ TO FLORENCE STOVE AS LEWISBURG WORKS MGR.

H. E. Kenitz has joined the Florence Stove Co. as works manager of the Lewisburg, Tenn., operations, announced H. H. Jeske, vice president. Kenitz was formerly Globe-American vice president.

MAYTAG NAMES HURTO HEAD OF PRODUCT PLANNING

The Maytag Co., Newton, Iowa, has announced the promotion of Earl Hurto to the newly-created position of supervisor of product planning in the product and market planning dept. Hurto's work will include planning new products and maintenance of quality of existing products.

TEMCO IMPROVES FACILITIES

Robert McCulloch, president, Temco Aircraft Corp., has announced that two projects are beginning which will add \$940,000 worth of improvements to facilities at the Greenville, Texas, plant. Expansion of the production building will add floor space of 144,800 sq. ft.

KAISER ALUMINUM TO BUILD NEW HEADQUARTERS IN CALIF.

A 25 story aluminum and glass structure in Oakland, Calif., will house the world headquarters of the Kaiser organization, including Kaiser Aluminum and Chemical Corp.

MAYTAG 6-MO. SALES UP 12%

Net sales of the Maytag Co. and domestic subsidiaries totaled \$58,010,364 during the first six months of 1956, setting a new record high for a six-month period, company officials have announced. Sales were 12% higher than during the first six months of 1955.

TRANE SALES UP 45%

Record total shipments are running 45% ahead of a peak 1955, D. C. Minard, president of The Trane Co., La Crosse, Wisc., has revealed.



Originators of Scientific
Package Testing Equipment

**New L.A.B.
DROP TESTER**
releases packages
from any position
without imparting
rotation

-
- Handles long and
odd-shaped packages
-
- Drops from
heights of 12" to 60"
-
- Capacity to
100 lbs.
-
- Installs in 3' x 4'
floor space
-
- Spring operated—
no power connection



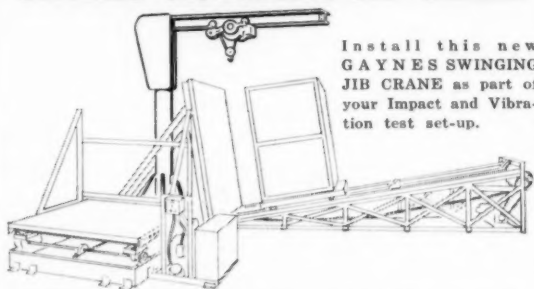
**Wide range of testing machinery
offered by L.A.B.**

Incline-impact (Conbur) testers, 600-10,000
lbs. capacity. Vibration testers—400-10,000
lbs. capacity; tables to 8' x 12'. High speed
reaction-vibration test stands for 50-10,000
lb. loads.



L.A.B. Corporation Skaneateles 4, N. Y.

GAYNES SWINGING JIB CRANE



Install this new
GAYNES SWINGING
JIB CRANE as part of
your Impact and Vibration
test set-up.

Quickly and easily handles your packaged products from one test operation to another without excess labor or additional unwieldy equipment. Simplifies the job of turning your test piece in proper position for each test sequence on incline impact (conbur) testers of ANY type.

This new GAYNES SWINGING JIB CRANE is a well engineered, heavy duty equipment — comes complete with beam, trolley and hoist. Slings can be provided as an extra.

WRITE FOR COMPLETE INFORMATION

GAYNES also manufactures a complete line of Impact (conbur) testers and Vibration testers for the government and private industry. Ask about our new 30" to 7' capacity adjustable Drop Tester.

Designers and builders of special testing
devices for comprehensive quality control.

**OVER 30 YEARS
OF PROVEN ENGINEERING EXPERIENCE**

GAYNES ENGINEERING CO.

1648 W. FULTON ST.

CHICAGO 12, ILL.

PEI NAMES CURTAIN WALL PUBLICATION COMMITTEE



JAMES W. VICARY, Chairman of the Architectural Division of the Porcelain Enamel Institute, has announced the creation of a new committee, the Curtain Wall Publication Committee. The function of this committee is to review all copy, layouts and art work for the proposed manual, "Porcelain Enamel in Architecture, Part 2, Curtain Wall Construction", which is being prepared by PEI's Architectural Division.

Meet at Pittsburgh

The first meeting of this newly formed committee took place August 7 at the Penn-Sheraton Hotel in Pittsburgh, Penn. At this time, the first draft of all copy was reviewed and the pictorial material, layout and format of the manual were discussed. Mr. Vicary pointed out that the manual, which has been in preparation for a number of months, is expected to be completed sometime in the late fall.

Many color pictures

Since permanent color is a distinct advantage of architectural porcelain enamel, the manual will include numerous color photographs, along with descriptions and detail drawings, of finished curtain wall construction jobs.

According to Mr. Vicary, the real "meat" of the manual will be the technical and design data section which will be of particular interest and value to architects and builders. Material for this section of the manual has been compiled from the studies of the numerous technical sub-committees formed in early 1955 as a part of the architectural division's organization.

Members of the newly-formed PEI Curtain Wall Publication Committee posed for a picture, see above, at their

first meeting. Present were, seated left to right, Earl McDonald, Ingram Richardson Mfg. Co.; A. B. Friedmann, Chicago Vitreous Corp.; J. W. Vicary, Ervite Corporation, chairman of PEI's Architectural Division; J. R. Leary, Aluminum Company of America; Milton Male, U. S. Steel; Edward Mackasek, PEI architectural consultant and, standing, L. R. Nachman, Seaport Metals, Inc.; John C. Oliver and W. N. Brinker, PEI; Herbert Spencer, Jr., Erie Enameling; William Withey, Armco Steel Corp.; A. C. Weierich, Davidson Enamel Products, Inc.; and M. R. Robinson, Downing Industrial Advertising. Function of the committee is to review all copy, drawings and other material in its various stages of production for the PEI Architectural Division's Curtain Wall Manual.

PFEIFFER TO WESTINGHOUSE ASSISTANT MANAGER POST

A. J. Pfeiffer has been named assistant manager of Westinghouse refrigerator-freezer engineering in Columbus, Ohio, announced O. H. Yoxsimer, manager of the department. For the past 24 years Pfeiffer has been with Crosley, most recently as manager of refrigerator, freezer and air conditioning engineering.

ALLEN IS JOHN WOOD V.P.

R. R. Allen has been named vice president and director of engineering and research for the John Wood Co., New York City, announced J. B. Balmer, president. Allen will be responsible for the establishment and management of the division whose function will encompass engineering and research and development for the seven domestic plants and three Canadian plants of the company.

MORSE, FORMERLY EXECUTIVE ENGINEER, FOR YORK, DIES

Louis Morse died in July, seven years after his retirement as executive engineer of York Corp., York, Pa. He was a former president of the American Society of Refrigerating Engineers.

OWENS-CORNING JOINS ARI

Owens-Corning Fiberglas Corp., Toledo, Ohio, recently became a member of the Air-Conditioning and Refrigeration Institute. Official representative of Owens-Corning will be Walter Flanagan, industry manager, filter distribution sales.

GAYLORD CONTAINER APPOINTS RIEFLER AND WORTHINGTON

George C. Riefler and William F. Worthington have been appointed to the national account sales staff of Gaylord Container Corp., Div. of Crown Zellerbach Corp., St. Louis, Mo., announced Joseph M. Arndt, Jr., director of national account sales.

RAFTER TO ARMCO SALES POST

James B. Rafter has been named special assistant to the manager of the Sales Div. of Armco Steel Corp., William B. Quail, manager of the Sales Div., has announced.

BYRNE & ROHL APPOINTED VPs FOR U. S. STEEL

Herbert F. Byrne has been appointed vice president of production planning, and Louis J. Rohl has been appointed vice president and chief metallurgical engineer for United States Steel Corp., Chicago, announced J. H. Elliott, assistant executive vice president - operations. Joseph M. Greer has been named general manager - production planning.

2 MILLION CARS WILL HAVE AIR-CONDITIONING IN '61

Automobile manufacturers forecast that two million air-conditioned cars will be produced in 1961. This estimate was made at a recent meeting of the Society of Automotive Engineers and reported in Ward's.

NATIONAL ELECTRICAL WEEK TO BE HELD FEB. 10-16, '57

The second annual National Electrical Week will be observed from February 10-16, 1957, announces Merrill E. Skinner, chairman, National Electrical Week Committee.

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CALLENDER WINS FIRST

ALLMETAL \$1,000 AWARD

The First Annual Allmetal Stainless Steel Award winner is John Hancock Callender, architectural consultant. The award is for the article judged to be of most value and interest to those who select and buy stainless steel parts or components. It is sponsored by Allmetal Screw Products Co., Inc., Long Island, New York. The winning entry, *The Design of Stainless Steel Curtain Walls*, brings Callender \$1,000 as first prize.

TUBE REDUCING CORP.

OPENS CHICAGO OFFICE

A district office has been opened in Chicago by Tube Reducing Corp., Wallington, N. J., according to C. L. Megargle, general sales manager. D. L. Watson will be Chicago district manager in the new office at 10336 South Western.